



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

# Manual for dynamic electrostimulation using DiaDENS-T and DiaDENS-DT devices

**General Editor**, V.V. Chemyshev, Medical Consultant for DENAS MS Corporation

**Editor**, K.Yu. Cheremkhin, Medical Director of DENAS MS Corporation

**Authors:**

A.A. Vlassov, Doctor of Medicine, Associate Professor, Head of Department of DENAS MS Corporation;

V.V. Malakhov, Doctor of Medicine, researcher for DENAS MS Corporation;

N.B. Nikolaeva, researcher for DENAS MS Corporation;

A.A. Safronov, researcher for DENAS MS Corporation;

M.V. Umnikova, Doctor of Medicine, Assistant Professor, Internal Medicine and Advanced Training Faculty at Ural State Medical Academy.

E-book version was created by Pavel Maslennikov, doctor-neurologist, manager, web-programmer.

E-mail: [info@denasms.com](mailto:info@denasms.com). Web: <http://www.denasms.com>, <http://www.jpastar.com> <http://www.zoodens.com>

**Reviewers:**

A.M. Vassilenko, Doctor of Medicine, Professor, Head of Department of Reflex and Manual [THERAPY](#) at Moscow State Medical-Sanitary University (City of Moscow).

This publication is an appendix to "Manual for Dynamic Electrostimulation Using DENAS Devices." The publication describes in detail the advantages of DiaDENS-T and DiaDENS-DT devices as compared to DENAS devices, lists additional treatment methods for various diseases, using the new expanded diagnostic and therapeutic possibilities afforded by DiaDENS devices.

© Author Collective, 2006

© Limited liability company RTS ART, 2006

© Limited liability company Tokmas-Press, 2006

© Limited liability company RIF SANED, 2006

USA Distributor: JPA      (888) 709-9457      [www.jpastar.com](http://www.jpastar.com)



[Content :: Chapters 1 2 3 4 5 6 7 :: Contacts](#)

# **Content**

## **CHAPTER 1. DIADENS DEVICES**

- [1. GENERAL INFORMATION](#)
- [2. INFORMATION ON THE SPECIFICS OF USING THE DIADENS DEVICE](#)

## **CHAPTER 2. DIAGNOSTIC CAPABILITIES AND OPERATION MODES OF DIADENS-T AND DIADENS-DT DEVICES**

- [1. PURPOSE AND APPLICATION OF TEST PROGRAM](#)
- [2. PURPOSE AND APPLICATION OF SCREENING PROGRAM](#)
- [3. PURPOSE AND APPLICATION OF FOLL PROGRAM](#)
- [4. PURPOSE AND PRACTICAL APPLICATION OF BIOREPER PROGRAM](#)

## **CHAPTER 3. THERAPEUTIC CAPABILITIES AND FUNCTIONING MODES OF DIADENS DEVICES**

- [1. THERAPY PROGRAM](#)
- [2. MED PROGRAM](#)

## **CHAPTER 4. DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS**

- [1. ZONE OF FRONTAL PROJECTION OF PATIENT'S COMPLAINT](#)
- [2. SEGMENTAL ZONES](#)
- [3. UNIVERSAL \(GENERAL\) ZONES](#)
- [4. TRIGGER ZONES](#)
- [5. VARIOUS SPECIAL ZONES](#)
- [6. CONCORDANCE SYSTEM ZONES AND POINTS](#)
- [7. THE MAIN ZONES OF RESUSCITATIVE THERAPY](#)

## **CHAPTER 5. RECOMMENDED TREATMENT PROCEDURES AND DIADENS DEVICE TECHNIQUE**

- [SCHEME 1. COMPLAINT IS COMPLEX AND LOCALISED, DISEASE IS ACUTE](#)
- [SCHEME 2. COMPLAINT IS COMPLEX AND LOCALISED, DISEASE IS CHRONIC](#)
- [SCHEME 3. PRESENCE OF A NUMBER OF DIFFERENT COMPLAINTS](#)
- [SCHEME 4. INDEFINITE COMPLAINTS](#)

## **CHAPTER 6. AURICULOTHERAPY USING DIADENS DEVICES IN MOST COMMON DISEASES**

## **CHAPTER 7. AURICULOTHERAPY USING THE DIADENS DEVICES IN SOME EMERGENCY SITUATIONS**



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

# CHAPTER 1 DIADENS DEVICES

## 1. GENERAL INFORMATION

### *Terminology*

#### **Dynamic Electroneurostimulation and its Hardware**

**DENS** - dynamic electroneurostimulation is a new method of electroreflex [THERAPY](#) (registered certificate from the Russian Federal Inspection Agency in health care and social development No. ••-2005/004, dated 04 March 2005)

**DiaDENS** - diagnostic dynamic electroneural stimulator with two models: DiaDENS-T and DiaDENS-DT.

**DiaDENS-T** - has an in-built electrode and an external therapeutic electrodes with the MSSI function (see below), and a broader range of therapeutic frequencies (20, 60, 77, 140 and 200 Hz), the [MED](#) prevention program (10 Hz) (registered certificate from the Ministry of Health, Russian Federation No. 29/23030902/5391-03 dated 26 June 2003).

**DiaDENS-DT** - in addition to DiaDENS-T, this device has [BIOREPER](#) and [FOLL](#) programs (fte6r/sfrac/o/7 Certificate of the Ministry of Health, Russian Federation No. 29/23030902/5391-03 dated June 26, 2003).

#### **Technological specifics and functional capacities of DiaDENS devices**

**Inbuilt electrodes** - electrodes mounted within the device frame. They are also referred to as being "zonal", as the DENS performed by them affects the neural elements of the skin area rather than the active point.

**External therapeutic electrode** - the electrode outside the device frame, connected to the device frame via a cable. Included in the shipment of DiaDENS devices.

**Diagnostic electrode** - an outside electrode for electropuncture diagnostics in [BIOREPER](#) and [FOLL](#) programs. Consists of a passive electrode and an active electrode. Included in the shipment of DiaDENS devices.

**LCD** - liquid crystal display - a small display located on the front part of DiaDENS devices.

**Skin impedance** - full electrical resistance of the skin surface in the area beneath the electrode.

**MSSI** - monitoring of surface impedance of skin in the [TEST](#) (the dosed process) and [SCREENING](#) programs. It enables the revelation of latent triggers (see below).

**[MED](#) - program** of minimum effective dosage for treatment using the device.

**[TEST](#) program** - dosed program of the DENAS and DiaDENS devices, which is designed to assess the functional condition of organs and the bodily systems by determining the time of stabilisation of the skin's electrical impedance beneath the electrode under stimulation with a frequency of 10 Hz.

**[SCREENING](#) program** - method used to measure the speed of change in surface impedance of the skin. Designed to define the active points unique to DiaDENS devices.

**[BIOREPER](#) program** - new method of electropuncture auriculodiagnostics (diagnostics relating to the auricle) to assess the functional state of all internal organs and systems, unique to DiaDENS-DT devices.

**[FOLL program](#)** - method of electropuncture assessment of the state of energy meridians and internal organs and systems in the human body. Can be used for [TEST](#)ing and selection of homeopathic and allopathic remedies and food supplements, unique to DiaDENS-DT devices.

**Therapy programme** - constant therapeutic programme carried out by DENAS and DiaDENS devices. In DiaDENS devices, it operates at 20, 60, 77, 140 and 200 Hz.

**Intensity of electric pulse effects of the DENAS devices**

- ER-1** - minimum energy range ([see section 2 of Chapter 1](#)).
- ER-2** - comfortable energy range.
- ER-3** - maximum energy range.

**DiaDENS Application Programs**

- Stationary** - when the electrodes remain immobile on the skin surface for the duration of the action exerted upon the suggested area.
- Labile** - when the inbuilt electrodes of the device are moved smoothly over the suggested operating area, without breaking contact with the skin surface, at a velocity of 0.5 to 2-3 cm per second.
- Stationary-labile** - when the device's electrodes can be held for some time in specific skin areas.

**Most frequently recommended treatment zones and points by the DiaDENS devices**

- AP** - auricular point (a biologically active point on the auricle).
- BAZ and BAP**- biologically active zones and biologically active points.
- Corporeal zones and points** - active reflexogenous zones and points on the patient's body.
- FPC** - frontal projection of the complaint or of the bodily organ showing evidence of the complaint (localised area of pain, lesion focus or organs with impaired function).
- Trigger zones** - zones of asymmetry where the skin electric impedance sharply deviates from that in adjacent areas.
- Segmental zones** - areas of skin on the human body linked via neural pathways to respective organs and parts of the human body.
- Universal (general) zones** - areas of skin which, when operated on, prompt a general rehabilitative response from the organism.
- Posterior zone of the meridian midpoint or the posterior midpoint line of the body** - area of skin with a universal trend. It covers the spinous processes of vertebrae (the central course) down from the second cervical vertebra to the last sacral vertebra. The spinous processes of vertebrae are situated on the back and can easily be felt in almost all people.
- "Concordance points of paravertebral zone"** - a paired skin area (right and left) following the universal trend. It is situated next to the spine (lateral paths), parallel to the vertical zone of the posterior meridian midpoint. In this area, BAPs are located as "[concordance points](#)"; furthermore, it is the zone of frontal projection of the spinal cord root outlets. Together with the zone of posterior median meridian, it forms the "Three paths" zone.
- Trigeminal zone** - skin area of frontal projection of the trigeminal nerve branch outlet on both sides (the "six points" zone). It relates to the universal trend zones.
- CCZ - cervical-collar zone.** It relates to segmental zones of universal trend.
- CC** - zone "cervical circle". It relates to segmental zones of universal trend.
- LSZ - lumbar-sacral zone.** It relates to segmental zones of universal trend.
- 2 CV** - skin area of frontal projection of the second cervical vertebra.
- 7 CV** - skin area of frontal projection of the seventh cervical vertebra.
- Systems of concordance. Zones and points** - human body limited skin areas or mucous membrane areas having zones and points representing all organs and systems of the organism. At present, these will be distinguished as follows: maxi-systems (e.g. on the body, face, head), midi-systems (e.g. [on feet and hands - the main concordance system Su Jok](#)), and mini-acupuncture systems (e.g. [in the ear](#)).

**A Comparative Description Using DENAS, DiaDENS-T and DiaDENS-DT**

Characteristic	DENAS	Dia DENS-T	DiaDENS-DT

Frequencies	10 Hz- <a href="#">TEST</a> (dose program), 77 Hz - <a href="#">THERAPY</a> (constant program)	10 Hz- <a href="#">TEST</a> , <a href="#">SCREENING</a> , and <a href="#">MED</a> programs. 20,60,77, 140, 200 Hz - <a href="#">THERAPY</a> frequencies in <a href="#">THERAPY</a> program	
Regulation of the power level of treatment	From 1 up to 10 Step-by-step acceleration	From 0 up to 99 Gradual acceleration, according to the sensations of the patient	
Visualization of parameter changes	None	Liquid crystal display	
Remote electrodes	None	present	
Opportunities of preventive influence	None	Minimum effective dose program	
Diagnostics of <a href="#">Trigger zones</a>	Empirically, according to the sensations of the patient and discretion of the operator	Objective parameters: <a href="#">TEST</a> program -seconds; <a href="#">SCREENING</a> program - ALT coefficient in standard units.	
Additional diagnostic facilities	none	none	The <a href="#">FOLL</a> method is an electropuncture diagnostics technique which works along energy channels for the assessment of the functional condition of all internal organs of the patient. This method is also designed to <a href="#">TEST</a> and select homeopathic and allopathic preparations for specific patients. The <a href="#">BIOREPER</a> method is a new form of functional electropuncture diagnostics on the auricle (auricle diagnostics), which reveals pathology at the pre-disease stage, and aids the selection of the optimum course of treatment.

### Advantages of Using DiaDENS Devices

- The DiaDENS-T and DiaDENS-DT are new devices used for a new method of treatment - dynamic electric neurostimulation. The portable DiaDENS device combines the facilities of reflex diagnostics and reflex therapy.
- DiaDENS devices have the constant function of monitoring the surface skin impedance (biologic feedback) using [TEST](#) and [SCREENING](#) programs.
- DiaDENS-T and DiaDENS-DT devices contain the exclusive diagnostic [SCREENING](#) program, which enables the assessment of the state of body systems before, during and after treatment, thus assessing the effectiveness of the [THERAPY](#).
- DiaDENS-DT device contains the unique [BIOREPER](#) program and the time-tested [FOLL](#) methodprogram, which allow for the fast assessment of the functional state of internal organs and meridians, the ascertainment of compatibility between pharmaceutical preparations and cosmetics, and the prevention of administrating potentially dangerous allergens.
- DiaDENS devices have a wide variety of frequencies, from 20 to 200 Hz for therapeutic treatment of various diseases, states and pain syndromes, and include the [MED](#) microcomputer program (testing minimum effective dosage), used for prevention of many diseases and pathological states.
- Intensity of application (energy range) can be easily selected for patients of any age with any level of pain sensitivity.
- In-built DiaDENS electrodes improve the effectiveness of DENS-therapy, and allow therapeutic treatment of biologically active points to be carried out.
- External therapeutic electrodes provide treatment of biologically active points on the auricle, around the eyes and on the body.

### Indications and Counter-Indications for Use of DiaDENS Devices

#### ***Suggestions for DENAS device usage***

- Treatment of acute and chronic pain syndromes.
- Correction of functional disorders in diseases of the muscu-loskeletal, nervous, cardiovascular, endocrine, urogenital systems,the respiratory organs, digestion, ears, nose, throat, eyes and skin.
- Rehabilitation following previous diseases, surgery, injuries.
- Prophylactics of diseases, recurrence of chronic diseases, functional disorders, separate symptoms and syndromes of most known diseases, including correction of disorders revealed at the preclinical stage with the aid of traditional diagnosis techniques.

#### ***Contraindications for usage***

##### **Absolute:**

- individual intolerance of electric current;
- presence of implanted heart pacemaker.

##### **Relative\*:**

- epileptic status
- neoplasms of any causation and localisation
- fever of unknown origin

- thrombosis of the veins
- acute mental, alcohol or narcotic excitation

\* treatment with the device will be conducted in these cases after consultation with physician.

### **Combination of DiaDENS device usage with other treatment techniques**

If necessary, a combination of the DiaDENS devices with other reflex therapy techniques (such as acupuncture and acupressure) is acceptable, as well as manual therapy, balneal water and mud methods, phytotherapy, homeopathy, therapeutic physical exercises and dieting, as well as with drug therapy. DENS combines well with symptomatic therapy, e.g. in simultaneous application of analgesic (non-narcotic as well as narcotic range) and spasmolytic preparations, the dosage of pharmacological drugs will then be reduced as well as the duration of their application. It is not recommended to conduct DENS with the DiaDENS devices on the same day as physi-therapeutic procedures (particularly electric-based treatment).



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

## CHAPTER 2

# DIAGNOSTIC CAPABILITIES AND OPERATION MODES OF DIADENS-T AND DIADENS-DT DEVICES

### 1. PURPOSE AND APPLICATION OF TEST PROGRAM

The TEST program is designed to assess the functional condition of organs and the bodily system by means of searching for zones where the skin impedance will be very different from that in adjacent areas (latent [Trigger zones](#)), as well as for treating the skin areas symmetrical to the complaint projection.

The energy range of the treatment is either minimum ([ER-1](#)) or comfortable ([ER-2](#)). The treatment method is [stationary](#); the electrodes are moved after an audio signal. The TEST program operates at the frequency 10 Hz.

To enter the TEST program, switch on the device and set the frequency to 10 Hz (pressing the FREQUENCY+ button until F10 appears on the screen). Place the electrodes onto the skin. Set the intensity level of the device (when the device is switched on, the intensity is set to zero). To increase the intensity, press the IN-TENSITY+ button repeatedly until the patient experiences a light pleasant tingling sensation.



**NOTE! The level of intensity is controlled subjectively according to the patient's sensations when the skin surface comes into contact with the electrodes. The pain sensation threshold should not be exceeded. When switching the device on, minimum energy range will be automatically set.**

Having stabilised the skin impedance of the skin under the electrode, the device emits an audio signal. Subsequently, on the high part of the screen a T value of the device's time spent on the zone is displayed. Write down the number. Next the device should be moved to an adjacent zone. Those areas where the treatment time of the device differs considerably from that in adjacent areas either positively or negatively are referred to as latent [Trigger zones](#). These zones should be treated using the

[THERAPY](#) program for 3-5 minutes at the frequency 60 or 77 Hz.

If the treatment time of the TEST program is over 1 minute, the electrodes should be moved to an adjacent area while continuing the process. This zone should be regarded as the latent [Trigger zone](#). Move to the next zone for testing.



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

## CHAPTER 3 THERAPEUTIC CAPABILITIES AND FUNCTIONING MODES OF DIADENS DEVICES

### 1. THERAPY PROGRAM

The THERAPY program is intended for emergency aid, the elimination of acute sources of complaints, and treatment of acupuncture points, using in-built and external electrodes for THERAPY of points or zones, and paraorbital electrodes.

The THERAPY program in the device operates at frequencies of 20, 60, 77, 140, and 200 Hz. For recommendations concerning the choice of therapeutic frequencies see "[Ranges of Energy exposure and Their Selection](#) (p.) and "[Frequencies of Electric impulse and Their Selection](#)," (p.).

In order to set the mode of the THERAPY program, carry out the following steps:

Switch the device on.

Select the frequency of 20, 60, 77, 140, or 200 Hz, pressing FREQUENCY+ to increase the frequency, and FREQUENCY - to decrease the frequency. When the device is switched on, the automatic frequency value is set at 77 Hz. If the intention is to use the in-built electrode, place the electrode on the relevant zone. When operating external electrodes for points or zones, insert one of the electrodes into the corresponding socket on the right-hand side of the device, and place the electrode onto the skin.

Select the power of influence as shown in the section entitled "Range of Energy exposure and Their Selection" ([Chapter 1, Section 2](#)).

The duration of treatment in the THERAPY program application in the direct projection of pain or functional disease is determined by the patient's reaction:

- the complaint subsided fully;
- the patient feels considerably better;
- the skin under the electrode becomes bright red, the patient experiences a feeling of "gooseflesh", warmth or lightness;
- the patient falls asleep.

The duration of influence on latent [Trigger zones](#) amounts to 1 to 5 minutes.



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

## CHAPTER 4 DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS

### 1. ZONE OF FRONTAL PROJECTION OF PATIENT'S COMPLAINT

Only the complaint presented by the patient him/herself can determine the primary treatment zone, using the in-built electrodes of DiaDENS devices using the [THERAPY](#) program. For instance, in cases where the patient complains of knee joint pain, the electrodes are placed on the impaired joint area, whereas in diseases of the broncho-pulmonary system they are placed on the chest area.

In areas of pain or in localised absence of sensitivity, the energy range [ER-2](#) or [ER-3](#) will be applied. In other situations and prepu-bescent children, the [ER-1](#) range should be used.

In most cases the treatment should be carried out at a frequency of 60 or 77 Hz. Where the pain is acute, the procedure should begin at a frequency of 200 Hz until the pain subsides, and then continued at frequencies of 77 and 20 Hz, with 3-5 minutes being spent at each frequency. For treatment of the frontal projection zone, both the [stationary](#) and the [labile](#) ways of treatment can be used, as well as the labile-stationary way.

The duration of the treatment on the zone depends on the presence or absence of the pain syndrome. If the patient's main complaint is pain, then the device action will be continued until the pain has completely disappeared or has considerably diminished. If there is no pain, then the action will be continued until the central complaint has disappeared (e.g. stuffiness of the nose, coughing, shortness of breath, palpitation, skin sensitivity disorders, etc.) or until redness appears beneath the electrode, a sensation of "goose flesh", a feeling of warmth or lightness. The treatment of the device in a single zone often causes the patient to relax and fall asleep; in this case, the DENS should also be stopped.



# CHAPTER 5

## RECOMMENDED TREATMENT PROCEDURES AND DIADENS DEVICE TECHNIQUE

A DENS operation will always be different for each patient and for each specific situation. In order to choose the zones to be operated on the order of operation, and how to plan a treatment course, one must comply with the following set of conditions:

- establish the main complaint, its localisation, history, details (i.e. to determine the character of pain);
- establish concomitant complaints (e.g. the arterial blood pressure of a patient with knee pain might periodically increase);
- determine whether this condition is acute or is just an exacerbation of a chronic condition (i.e. whether the complaints are occurring for the first time or the patient had similar symptoms before);
- determine whether the patient took any drugs (both on account of the given deterioration of the condition or as a basic [THERAPY](#) on a constant basis).

Having received answers to these questions, the operator can use one of the treatment schemes given below:

### SCHEME 1. COMPLAINT IS COMPLEX AND LOCALISED, DISEASE IS ACUTE

In cases of emergency, life-threatening conditions, DENS should be carried out as the first before-doctor aid. In other cases, DENS may be combined with medicinal treatment and other kinds of treatment prescribed by a doctor, but in a number of cases DENS is applied as an independent curative method.

The purpose of DENS is to eliminate or to substantially reduce the existing symptoms.

**NOTE!** The first - and quite often the only - sign of serious disease may be a pain that suddenly appears at any localisation. Therefore, if unprecedented attacks of pain occur and reoccur continuously, and pain intensity becomes stronger, it is necessary to consult a doctor urgently!

In an acute period of illness DENS treatment should be started on the [FPC](#) zone at frequency of 20, 60, 77, 140 or 200 Hz depending on the situation (see the [choice of frequencies](#) and recipes for specific conditions, [Chapter 6](#)). If the treatment of the complaint in its frontal projection is impossible because of the current circumstances (e.g., you have back pain, but you are in a tram at the current moment), as well as in elderly patients and children, the procedure can be commenced by processing the [Su Jok](#) zone in the [THERAPY](#) program at frequency of 60 or 77 Hz at either the [ER-1](#) or [ER-2](#) ranges until the condition improves.

If you know the auricular [THERAPY](#) method, in case of acute complaints begin treatment of auricular points in the [THERAPY](#) program at frequency of 20, 60, or 77 Hz at the [ER-2](#) range, up to 5 minutes per point.

Treatment of the [FPC](#) zone, auricular points and concordance zones can be combined, alternated or repeated until any of the following are in evidence:

- the complaint has been fully eliminated,
- the patient feels significantly better,
- there is a hyperemia (reddening of skin), feeling of "goose flesh" or warmth and lightness in the zone beneath the

- electrode,
- patient has fallen asleep.

If any of these results are in evidence, the procedure should be stopped at any stage.

If the effect is not distinct enough, the following should be performed:

- increase or decrease the frequency of application at the [FPC](#) zone;
- increase the power of the energy deposition according to patient's pain tolerance;
- in cases of diseases of paired organs or symmetrical body areas, treat the healthy side using the [TEST](#) program at the [ER-2](#) range;
- treat the segmental zone that corresponds to the [complaint zone](#) (see Chapter 4) using the [THERAPY](#) program at 60 or 77 Hz at the [ER-1](#) or [ER-2](#) range;
- treat additional zones of influence (for example, common zones, he-gu and zu-san-lei points, liver and intestinal projection, and in women, the suprapubic zone and others - refer to Chapter 4).

With most of pain symptoms and functional disorders, it is enough to treat 3-4 zones (in rare cases, 8-10 zones and points are necessary) during one procedure.



**NOTE! If the complaint resurfaces, the procedures are to be repeated as required. When complaints become less severe, " the interval between procedures should be 30-45 minutes in children and 1.5 hours in adults.**

In the event of an acute illness, treatment must be finished after the elimination of the symptoms.

**Clinical example.** During epidemic of influenza in an otherwise healthy patient, acute respiratory viral disease (ARVD) symptoms appear suddenly. This is an acute illness. The patient suffers from a head-cold, a cough, fever, and he or she feels unwell. It is advisable to start the treatment with [FPC](#), which is a straight [projection of the nose](#) and [submandibular](#) zone using the [THERAPY](#) program at 60 or 77 Hz at the [ER-2](#) range in the [stable](#) or [labile](#) mode, and/or AT 14, AT 13, AT 55, AT 71 or AT 95. It is possible to treat concordance zones in keeping with the [Su Jok](#) method in the area of thumbs and feet using the [THERAPY](#) program at 20, 60 or 77 Hz at [ER-2](#) for 3-5 minutes for each zone. Treatment of these zones can be combined and repeated until the condition improves (until the recovery of nasal breathing). If complaints recommence, treatment should be repeated (up to 5-7 times and more per day as required). If the result of DENS treatment is not satisfactory, you can treat auxiliary zones (he-gu and zu-san-lei zones, projection of liver and intestine and suprapubic areas, common zones and other). After recovery, DENS treatment must be stopped.



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

## CHAPTER 6 AURICULOTHERAPY USING DIADENS DEVICES IN MOST COMMON DISEASES

The auricular points indicated in this Chapter should be used as a supplement to treatment programs for various diseases with the aid of dynamic electroneurostimulation devices described in Chapters 6-7 "Guide for dynamic electroneurostimulation using DENAS devices", with due consideration of the possibility of using the "[TEST](#)" and "[SCREENING](#)" program, as well as the extended frequencies of the DiaDENS device.

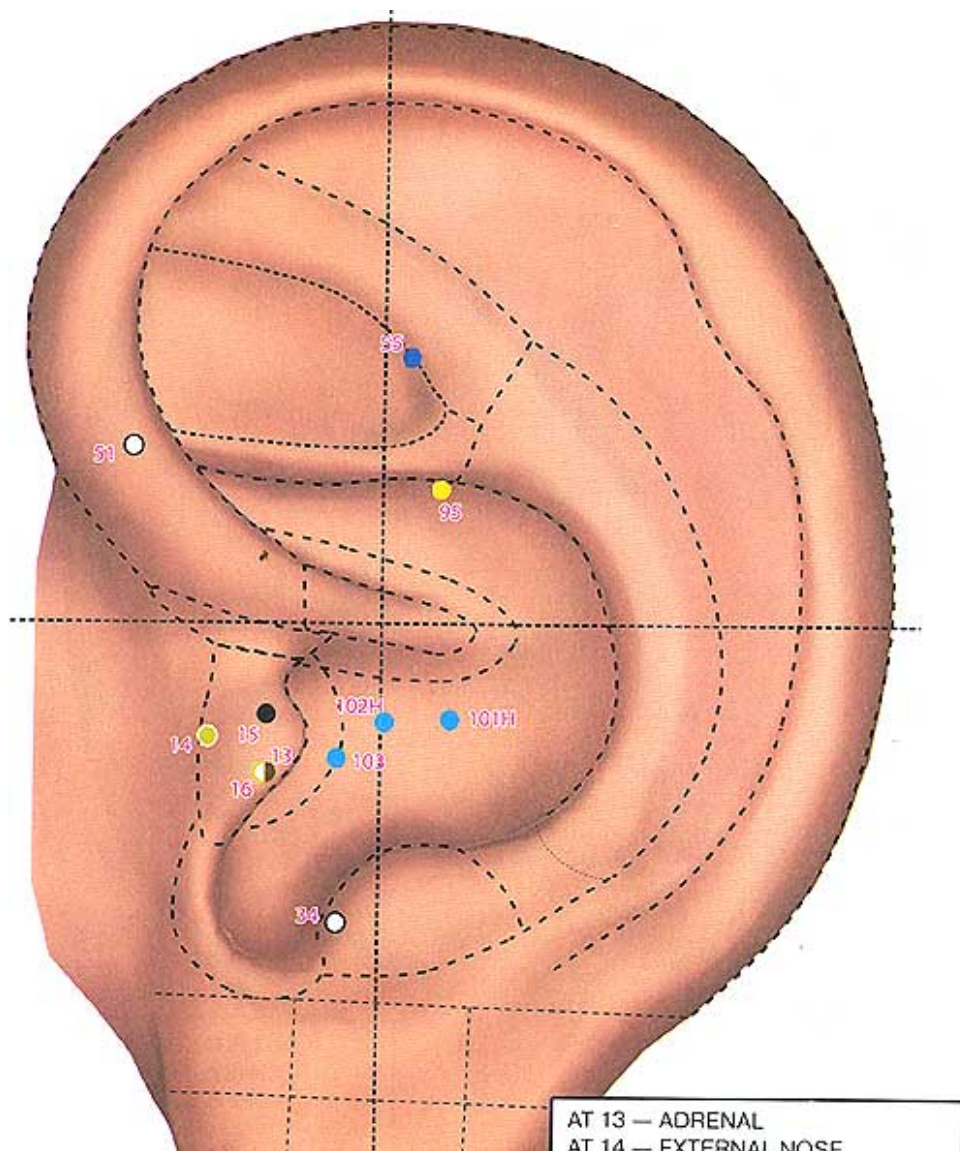
### 1. The most frequently used auricular points in diseases of respiratory organs

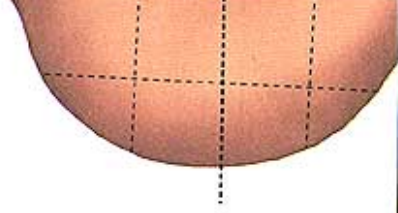
1) Rhinitis, nasal stuffiness (cold, rhinitis):

- AT 13, AT 14, AT 16, AT 55, AT 95.

2) Cough, suffocation (croup, tracheitis, bronchitis, bronchial asthma, pneumonia):

- AT 13, AT 101, AT 102, AT 103, AT 51, AT 55, AT 34.





AT 13 — ADRENAL  
 AT 14 — EXTERNAL NOSE  
 AT 16 — NASAL CAVITY  
 AT 34 — CEREBRAL CORTEX  
 AT 51 — SYMPATHETIC NERVOUS SYSTEM  
 AT 55 — SHAN-MAN  
 AT 95 — KIDNEY  
 AT 101 — LUNG  
 AT 102 — BRONCHI  
 AT 103 — TRACHEA

## 2. The most frequently used auricular points in diseases of the ear, throat and nose (otorhinolaryngological diseases)

1) Pain, sensation of bursting, nasal stuffiness (antritis, frontitis, sinusitis):

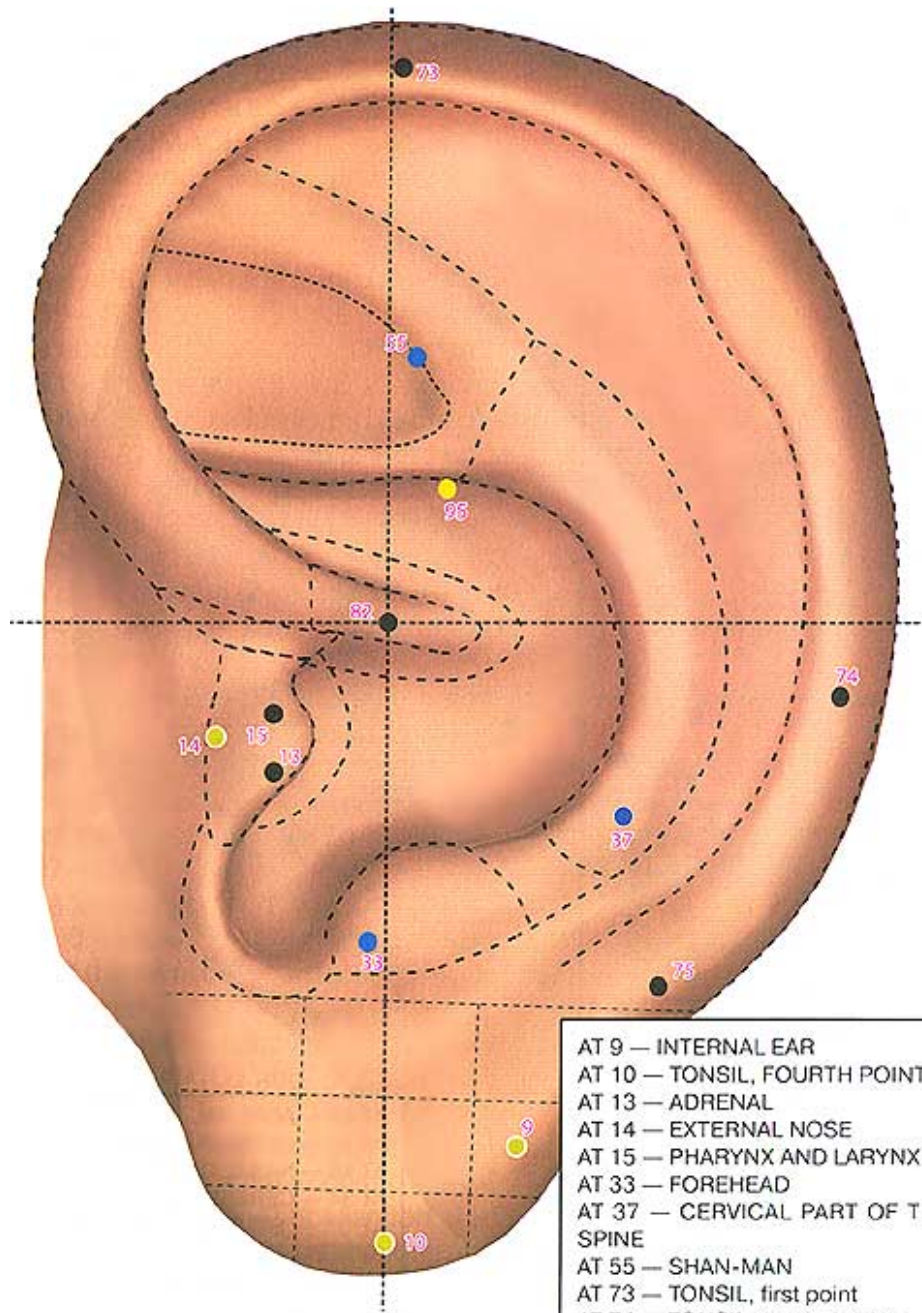
• AT 14, AT 15, AT 33, AT 95, AT 13, AT 71.

2) Pain in the throat, hoarse voice, cough (laryngitis, pharyngitis, tonsillitis, sore throat):

• AT 10, AT 15, AT 13, AT 55, AT 73, AT 74, AT 75.

3) Earache, deafness (otitis, neurosensory deafness, auditory neuritis):

• AT 9, AT 13, AT 37, AT 82, AT 95.

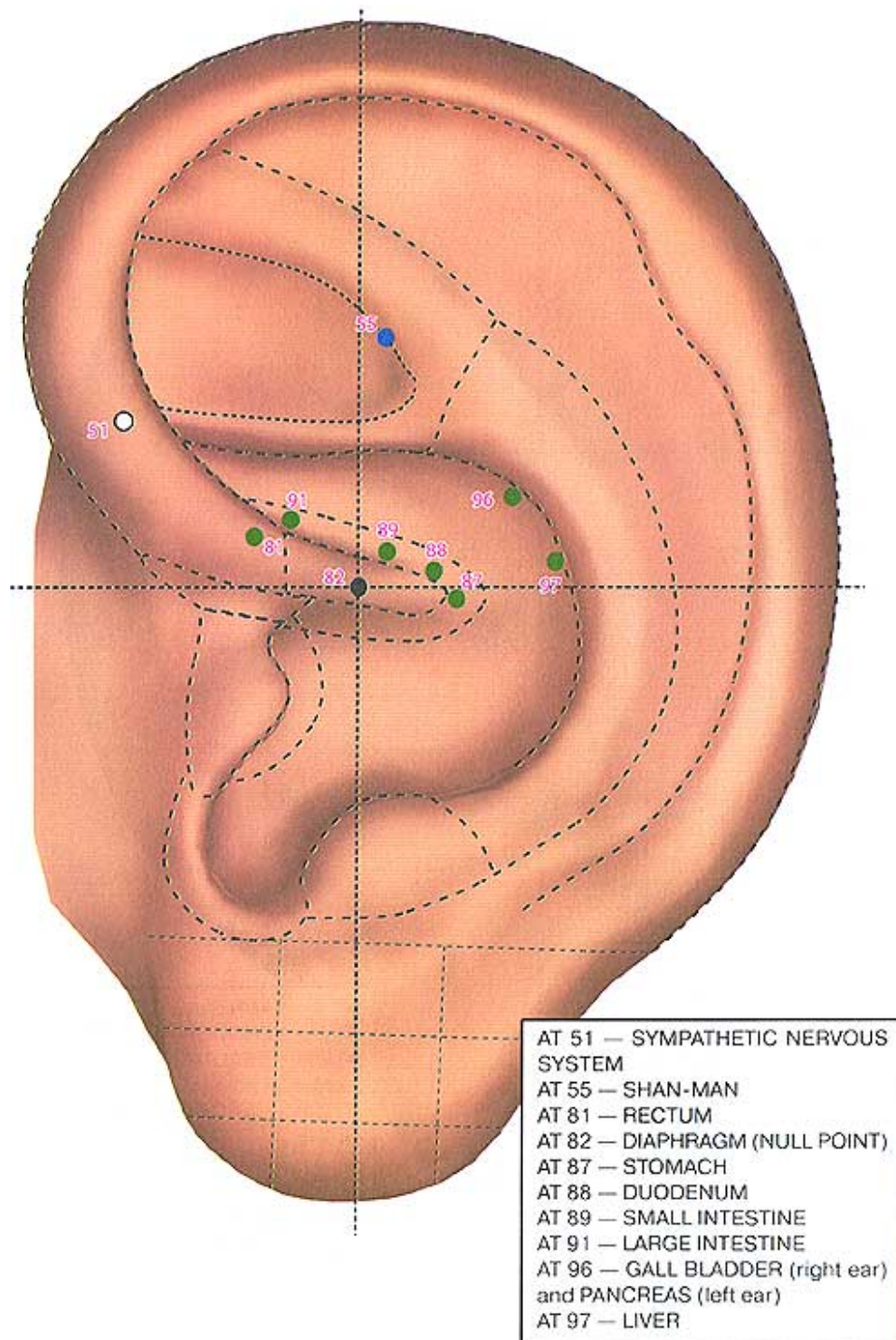


AT 9 — INTERNAL EAR  
 AT 10 — TONSIL, FOURTH POINT  
 AT 13 — ADRENAL  
 AT 14 — EXTERNAL NOSE  
 AT 15 — PHARYNX AND LARYNX  
 AT 33 — FOREHEAD  
 AT 37 — CERVICAL PART OF THE SPINE  
 AT 55 — SHAN-MAN  
 AT 73 — TONSIL, first point  
 AT 74 — TONSIL, second point  
 AT 75 — TONSIL, third point  
 AT 82 — DIAPHRAGM (NULL POINT)  
 AT 95 — KIDNEY

## 3. The most frequently used auricular points in diseases of the digestive organs

1) Stomach pain, nausea, vomiting, abdominal distension:

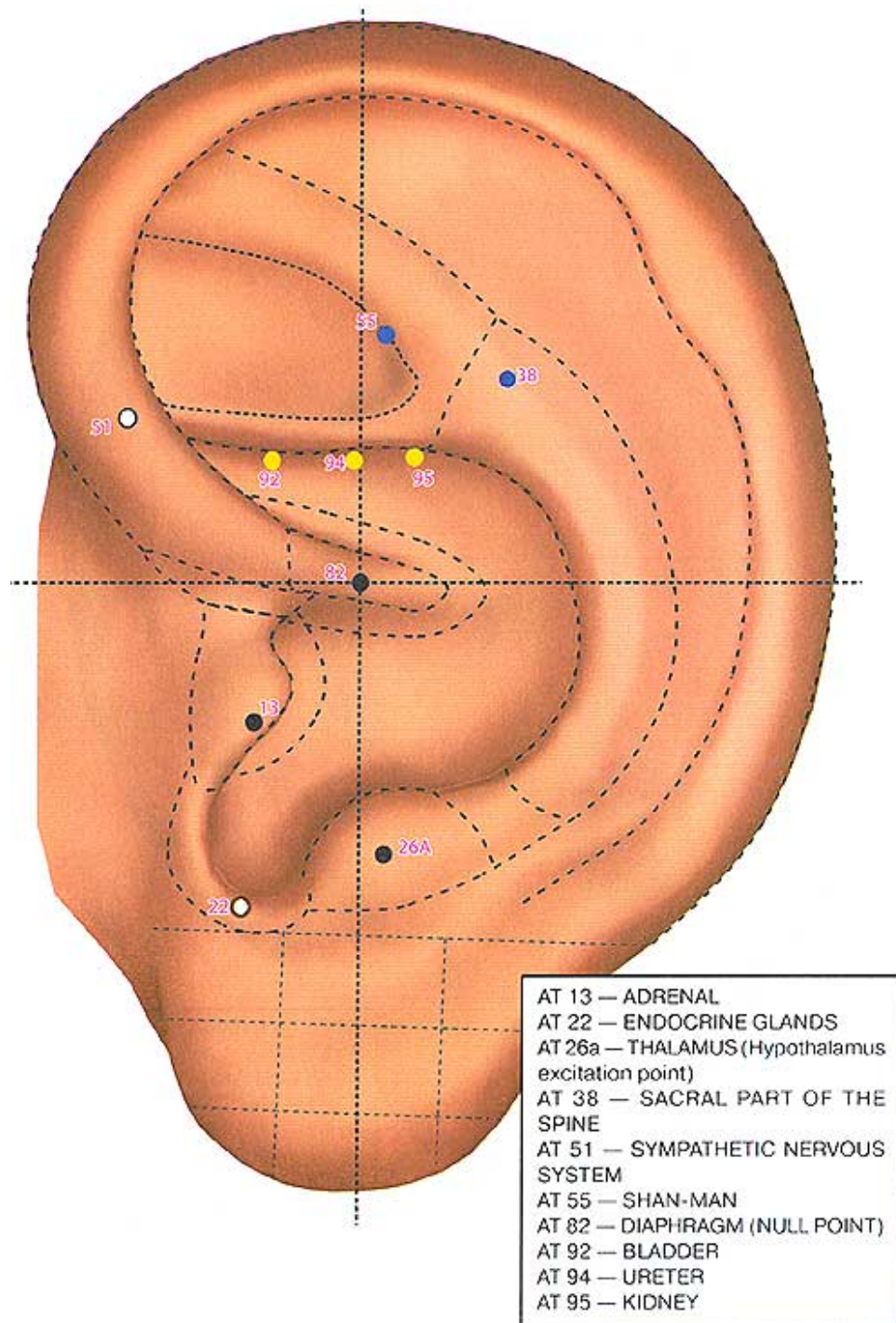
- AT 87, AT 88, AT 51, AT 55, AT 96.
- 2) Diarrhoea:
- AT 87, AT 89, AT 96, AT 82.
- 3) Constipation:
- AT 87, AT 91, AT 82, AT 96.
- 4) Haemorrhoids:
- AT 81, AT 91, AT 87, AT 97, AT 55.



#### 4 The most frequently used auricular points in diseases of the kidneys and urinary tract

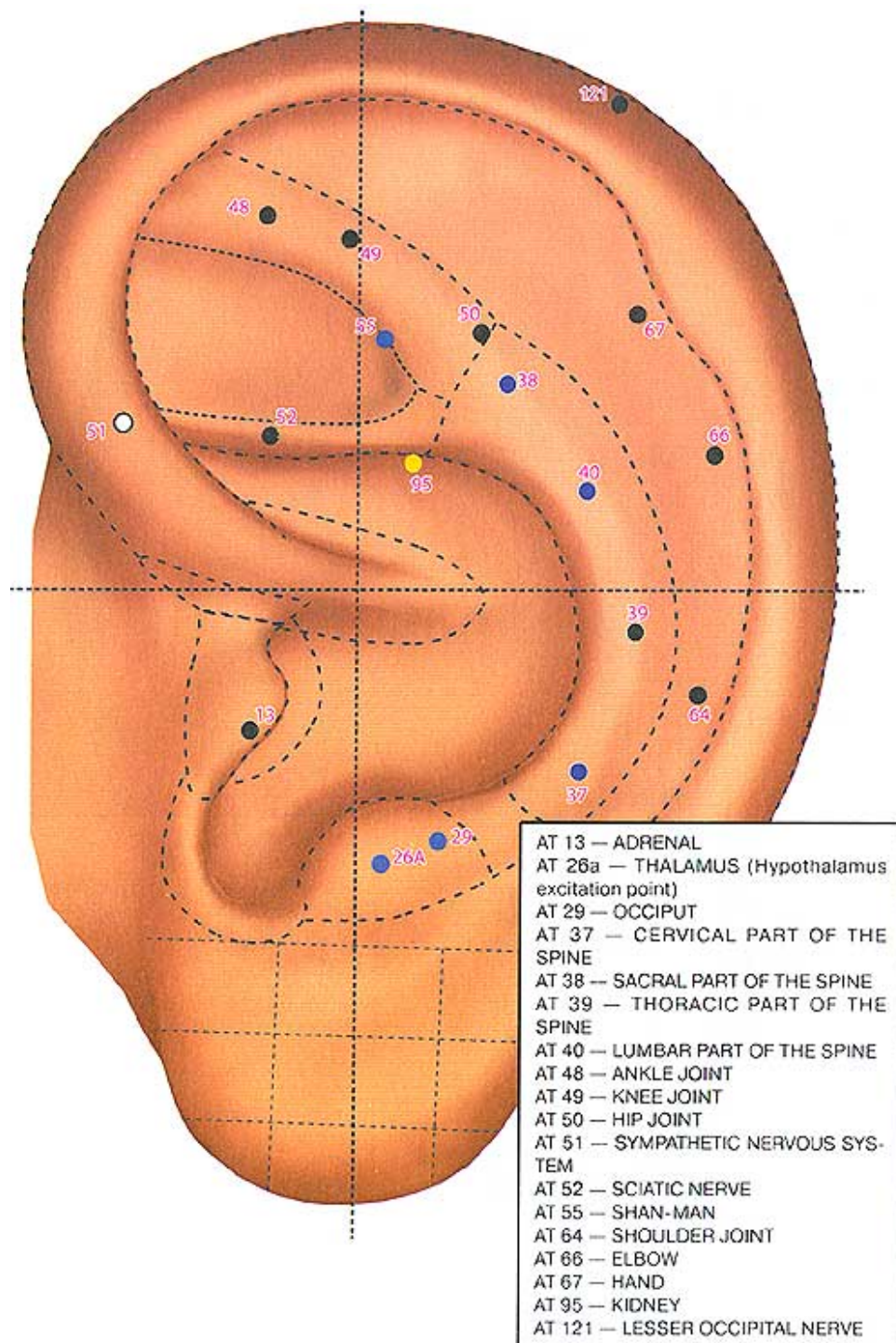
1) Pain in the small of the back, frequent and painful urination (pyelonephritis, urolithiasis, glomerulonephritis, cystitis, urethritis):

- AT 95, AT 92, AT 94, AT 51, AT 55, AT 38, AT 13, AT 22, AT 82, AT 26a.



### 5. The most frequently used auricular points in diseases of the musculoskeletal system

- AT 64, AT 37, AT 29, AT 26a, AT 55, AT 95, AT 13.
- 2) Pain in the elbow joint:
  - AT 66, AT 39, AT 26a, AT 55, AT 95, AT 13.
- 3) Pain in the radiocarpal articulation:
  - AT 67, AT 37, AT 55, AT 95, AT 13.
- 4) Pain in the hip joint:
  - AT 50, AT 38, AT 40, AT 55, AT 95, AT 13.
- 5) Pain in the knee joint:
  - AT 49, AT 40, AT 55, AT 95, AT 13.
- 6) Pain in the ankle-joint:
  - AT 48, AT 40, AT 55, AT 95, AT 13.
- 7) Pain in the spine cervical segment:
  - AT 37, AT 29, AT 121, AT 55, AT 95, AT 51, AT 26A.
- 8) Pain in the spine thoracic segment:
  - AT 39, AT 37, AT 55, AT 95, AT 51, AT 26A
- 9) Pain in the spine lumbar-sacral segment:
  - AT 40, AT 38, AT 52, AT 55, AT 95, AT 51, AT 26A



## 6. The most frequently used auricular points in nervous diseases

1) Headache (migraine, vascular and other brain diseases):

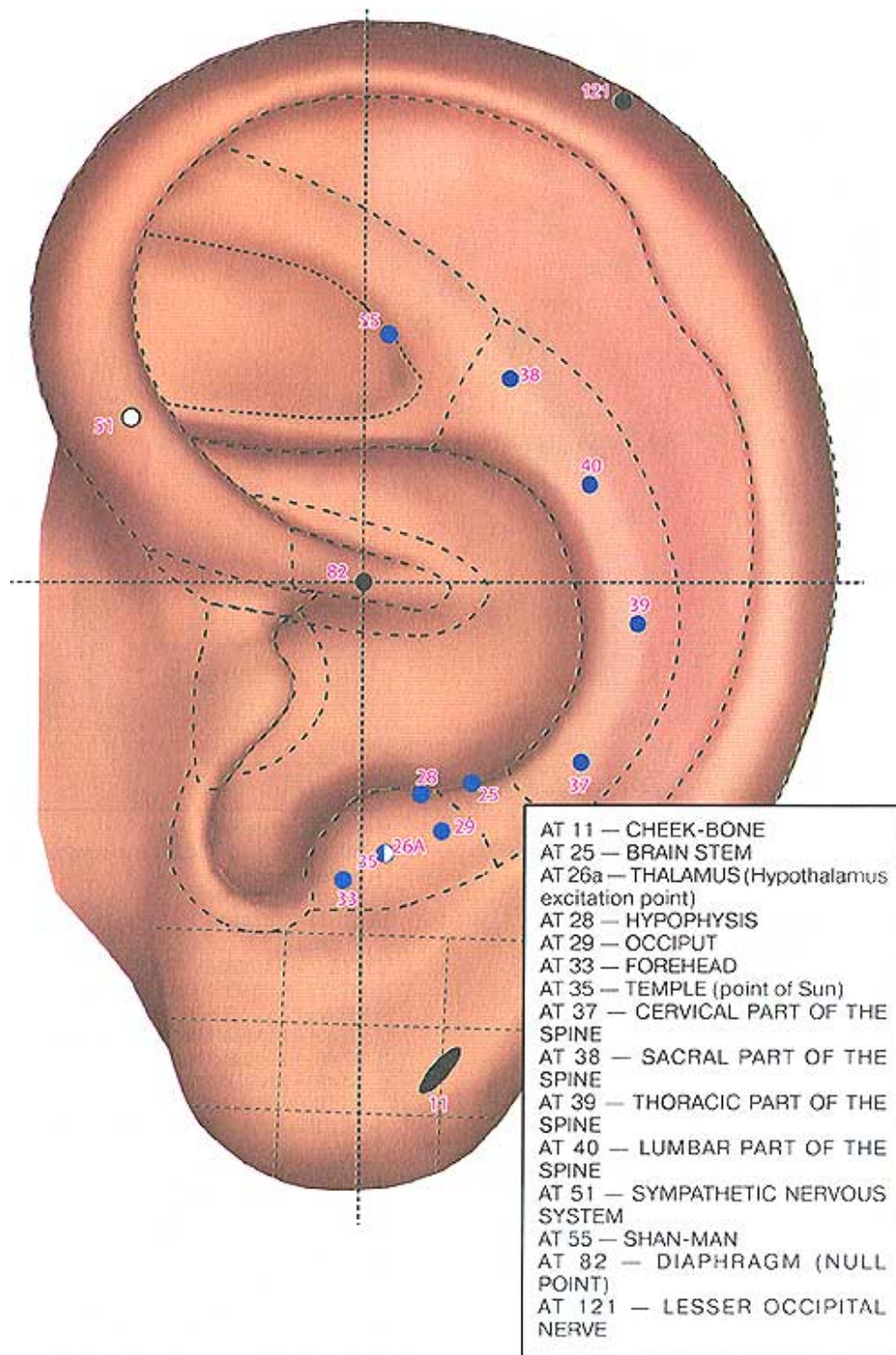
- AT 33, AT 35, AT 25, AT 28, AT 29, AT 26a, AT 55, AT 51, AT 121.

2) Facial pains (neuralgia of the trigeminal nerve):

- AT 11, AT 26a, AT 25, AT 55, AT 37, AT 29, AT 51, AT 82.

Postinsult conditions, paralyses, consequences of the brain lesions and infectious of the central nervous system:

- AT 37, AT 38, AT 39, AT 40, AT 82, AT 29, AT 55, AT 51, AT 25



## 7. The most frequently used auricular points in cardiovascular diseases

1) Pain in the heart (coronary heart disease, cardialgia, rheumatism, myocardiodystrophy and other diseases):

- AT 100, AT 51, AT 39, AT 42, AT 82, AT 55, AT 13.

2) Increased blood pressure (arterial hypertension, hypertension); hypertensive crisis:

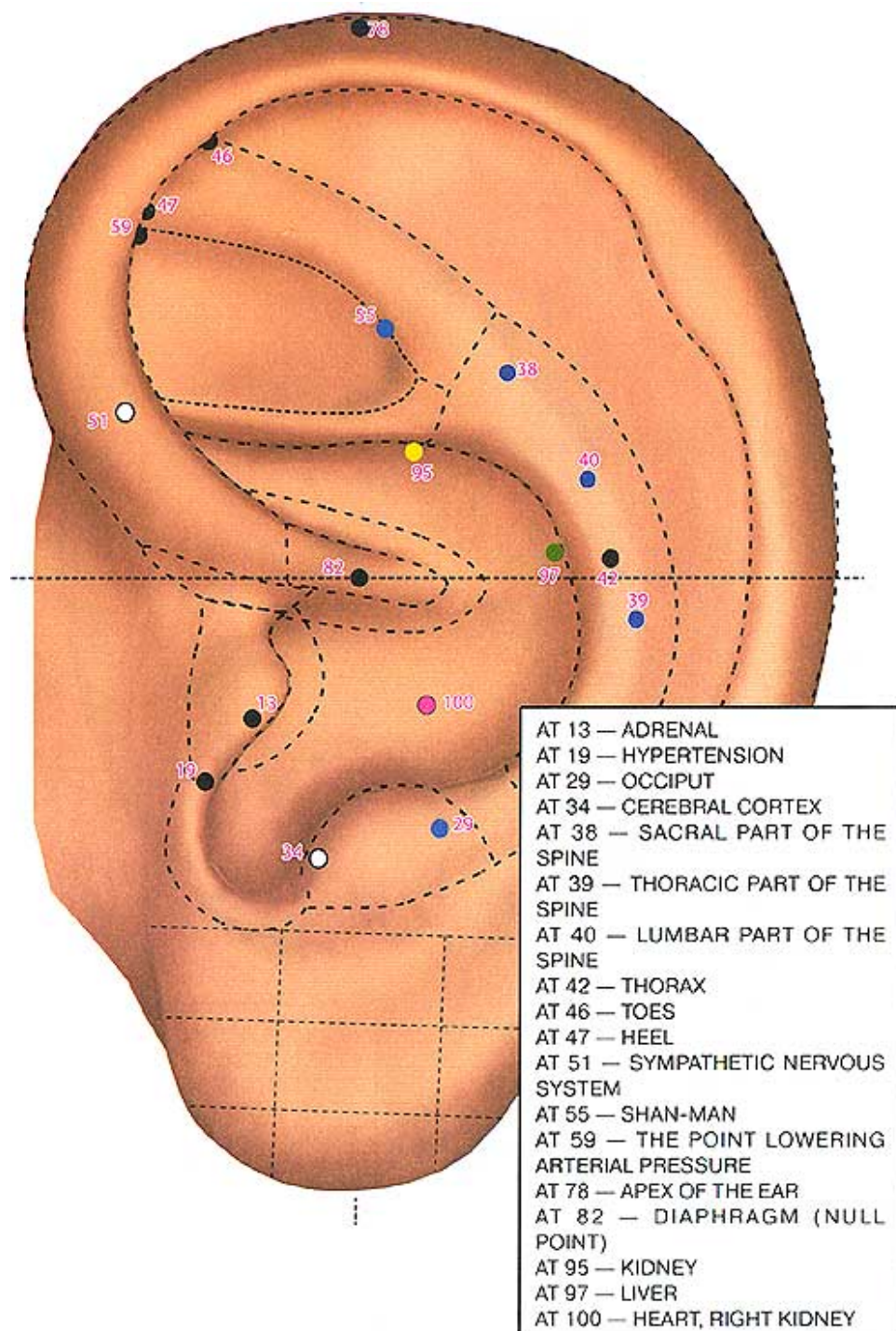
- AT 105, AT 59, AT 78, AT 95, AT 100, AT 55, AT 29, AT 34, AT 19.

3) Pain in the legs, "intermittent claudication" (diseases of peripheral arteries):

- AT 38, AT 40, AT 46, AT 47, A 51, AT 55, AT 97.

4) Heaviness in the legs, oedemas, extended coiled veins, varicose nodes, trophic ulcers on the legs (syndrome of chronic venous failure, varicose diseases of the lower extremities):

- AT 40, AT 46, AT 38, AT 13, AT 97, AT 82, AT 55.



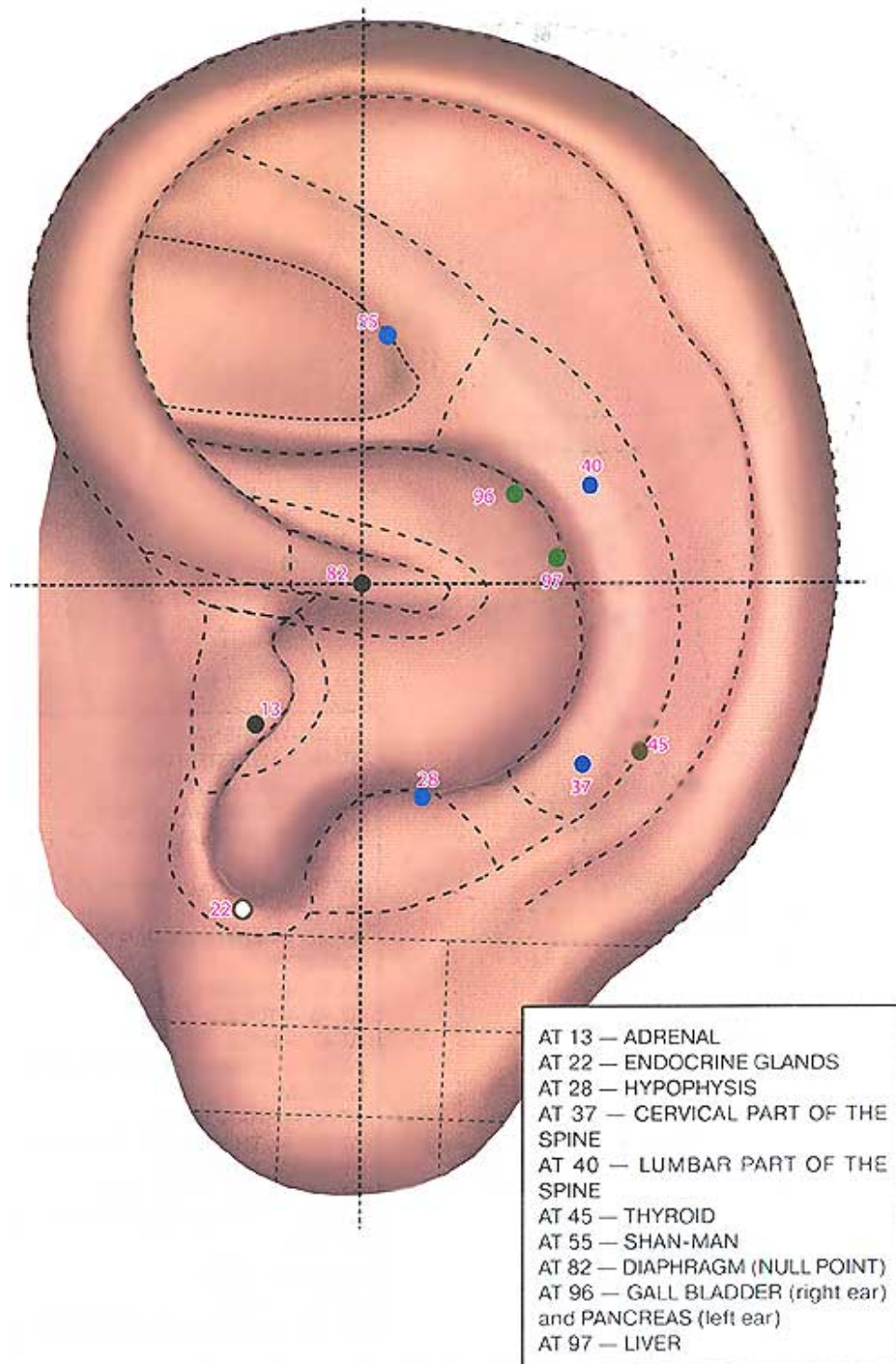
## 8. The most frequently used auricular points in endocrine diseases

### 1) Diabetes mellitus:

- AT 97, AT 96, AT 22, AT 55, AT 13, AT 45, AT 40, AT 82.

### 2) Thyroid gland diseases:

- AT 45, AT 13, AT 55, AT 22, AT 37, AT 28.



## 9. The most frequently used auricular points in obstetrics, in gynaecological diseases and in diseases of mammary glands

### 1) Menstrual cycle disorders:

- AT 58, AT 13, AT 95, AT 55, AT 34, AT 56, AT 40, AT 23, AT 82.

### 2) Pain in the lower abdomen (inflammatory and other diseases of female reproductive organs):

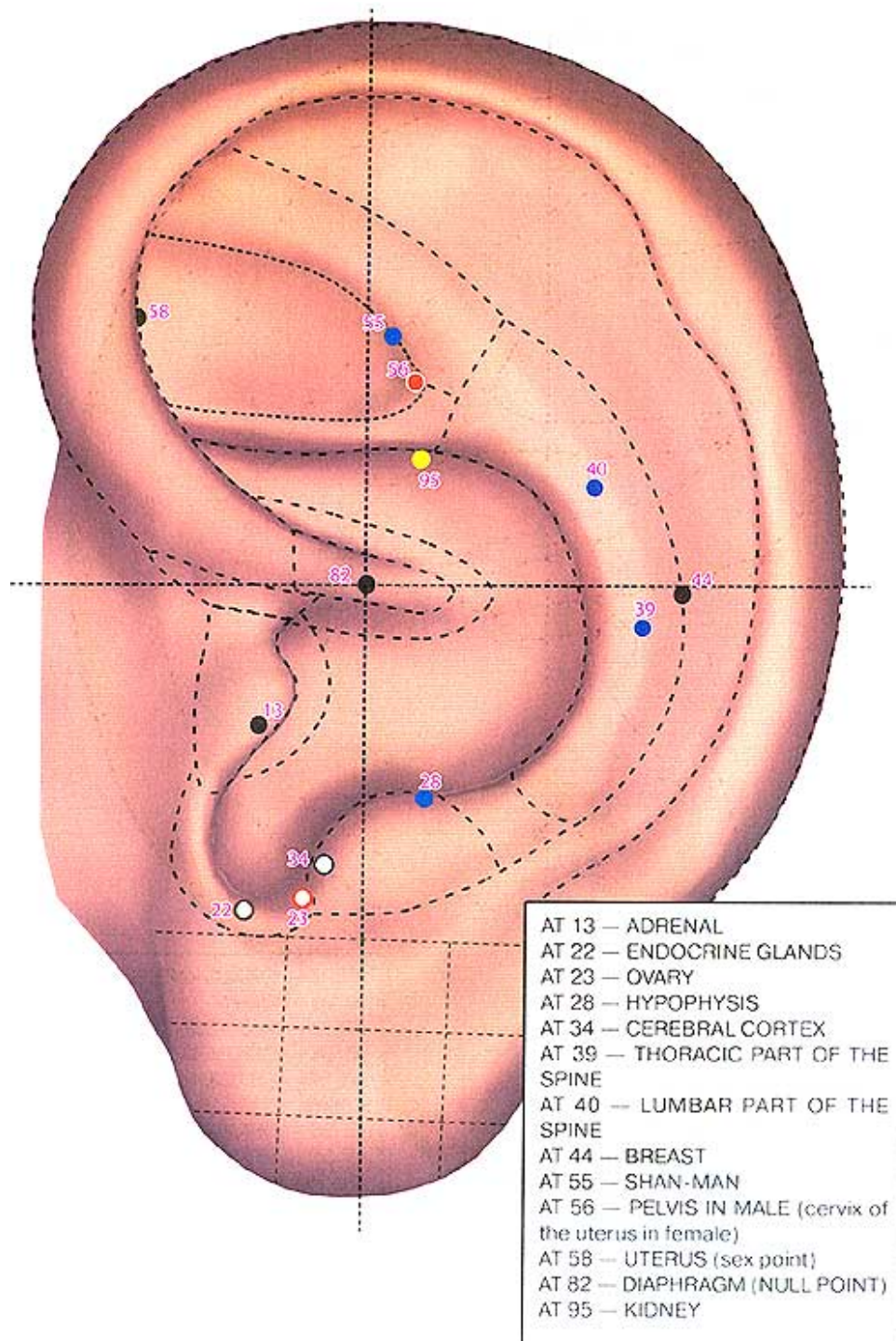
- AT 23, AT 56, AT 58, AT 34, AT 82, AT 13, AT 22, AT 95, AT 55.

### 3) Hypogalactia:

- AT 44, AT 39, AT 28, AT 82.

### 4) Lactostasis, lactation mastitis:

- AT 39, AT 44, AT 55, AT 82, AT 95, AT 13.



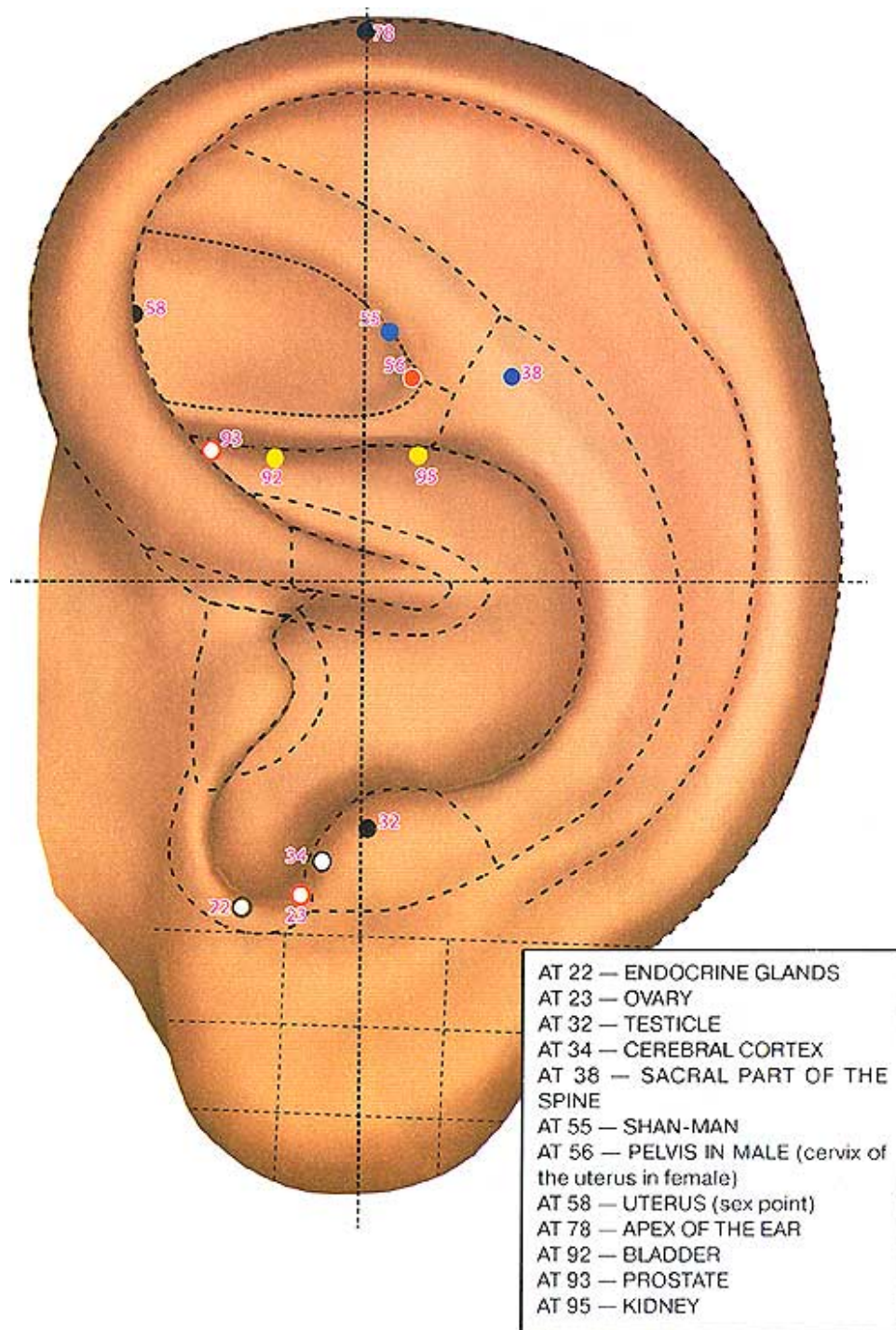
#### 10. The most frequently used auricular points in diseases of male genitalia

1) Pain in the lower abdomen, in the genitalia area (prostatitis, urethritis, orchitis, epididymo-orchitis):

- AT 56, AT 55, AT 38, AT 93, AT 92, AT 32, AT 34, AT 22, AT 95.

2) Sexual function disorders:

- AT 55, AT 93, AT 58, AT 23, AT 32, AT 78, AT 34.



# **11. The most frequently used auricular points in skin diseases and in cosmetology**

1) Rash, spots, skin abscesses, skin itch (pyoderma, psoriasis, neurodermatitis, eczema, pustular, fungal and other skin diseases):

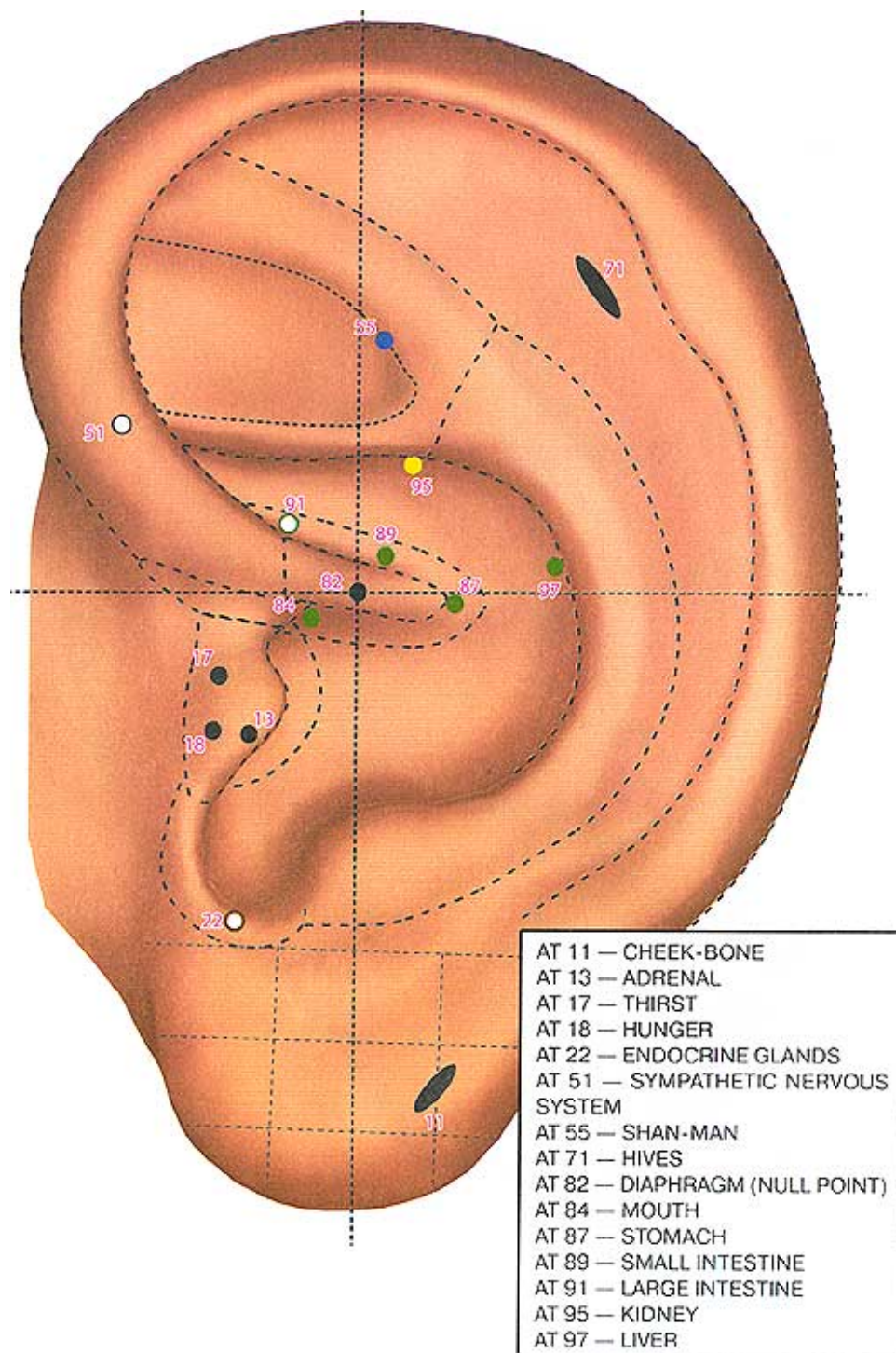
- AT 51, AT 55, AT 13, AT 22, AT 91, AT 89, AT 71, AT 97.

2) Facial care:

- AT 11, AT 87, AT 55, AT 95.

3) Cellulitis, obesity:

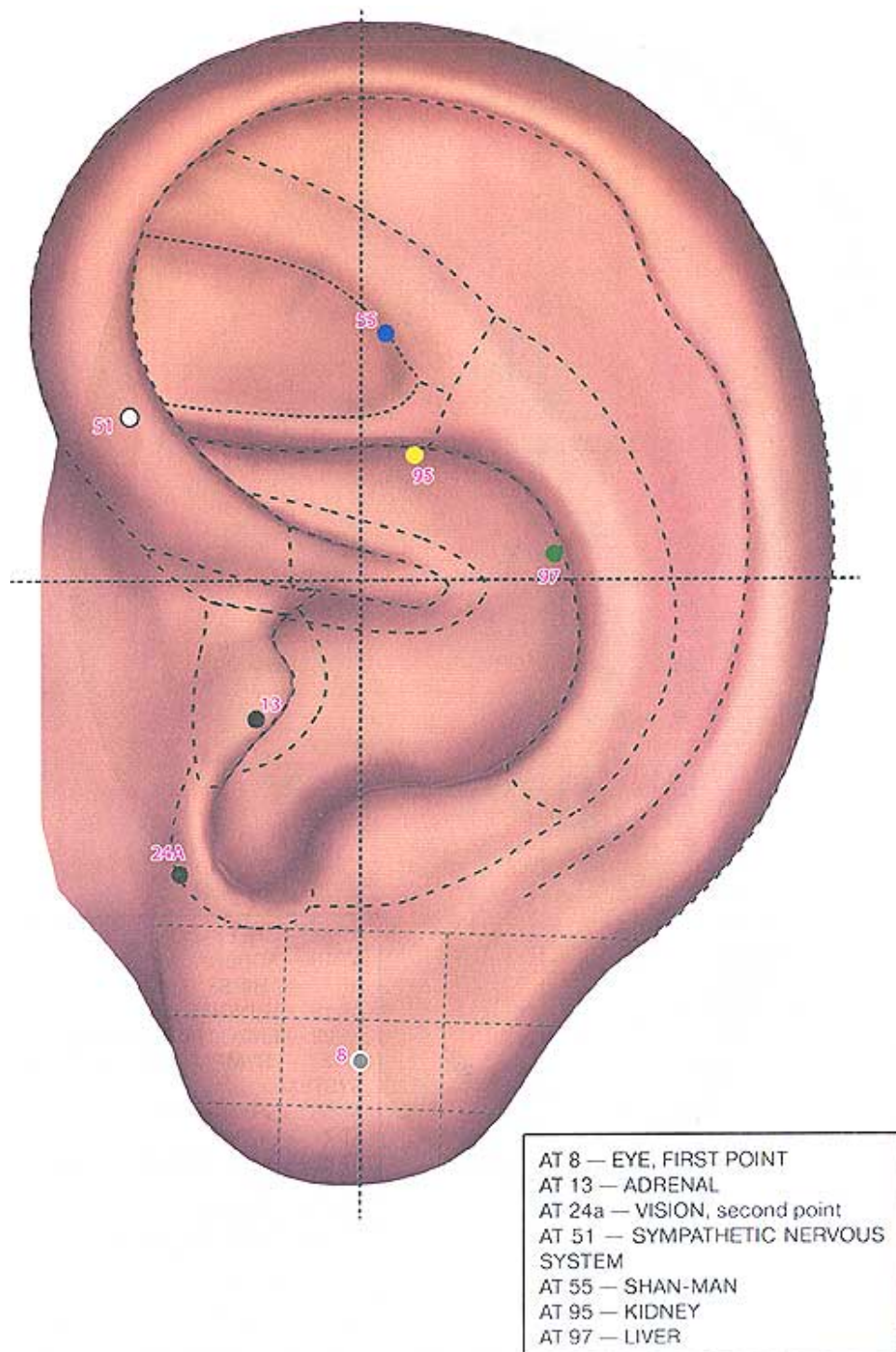
- AT 17, AT 18, AT 84, AT 87, AT 22, AT 82.



## 12. The most frequently used auricular points in eye diseases

1) Refraction disorders (cyclospasm, myopia, hypermetropia, astigmatism), glaucoma, cataract, inflammatory eye diseases:

- AT 8, AT 24A, AT 97, AT 51, AT 55, AT 95, AT 13.



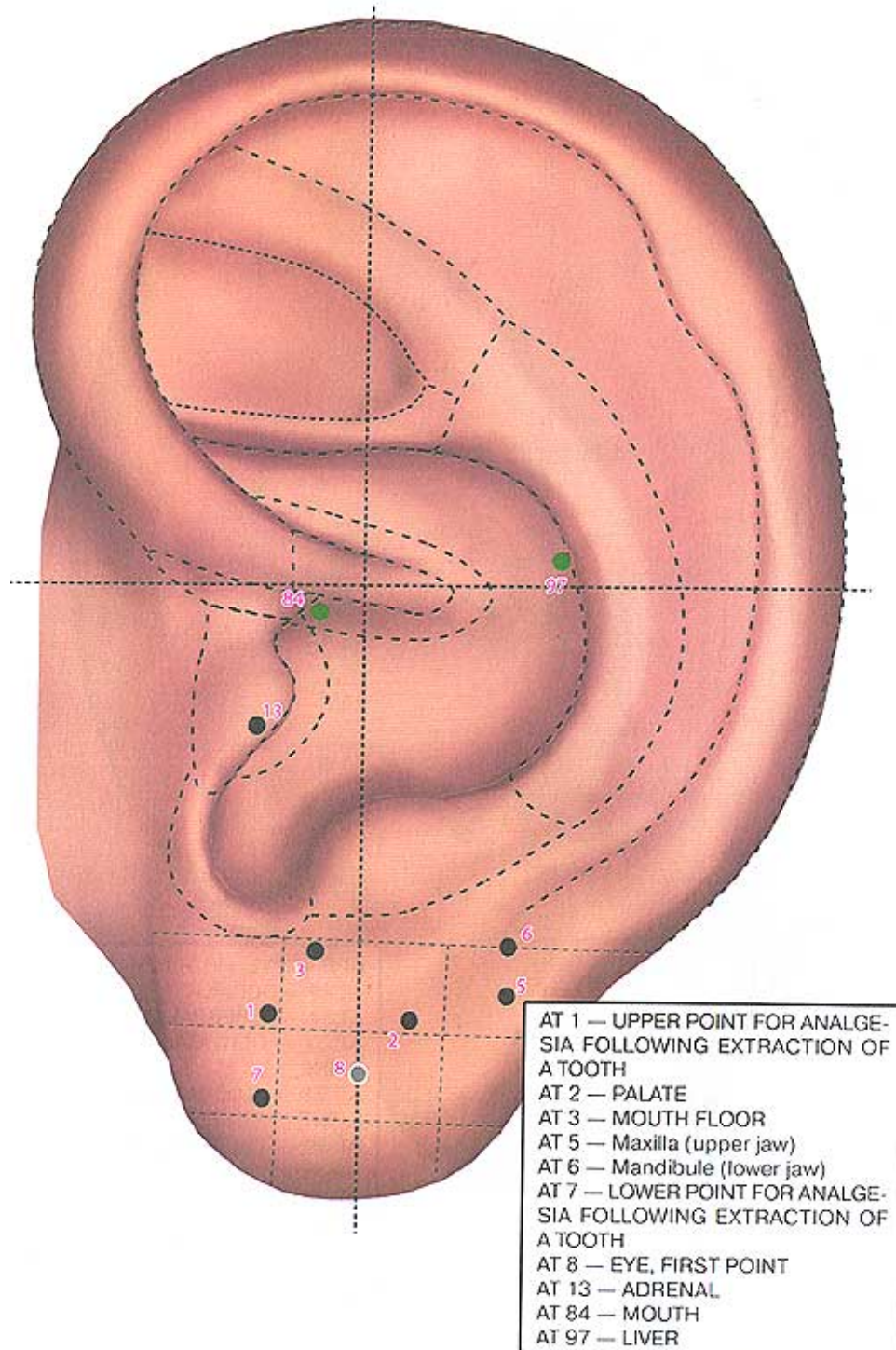
### 13. The most frequently used auricular points in diseases of oral mucous membrane and dental-jaw system

1) Toothache:

- AT1,AT5,AT6,AT7,AT8.

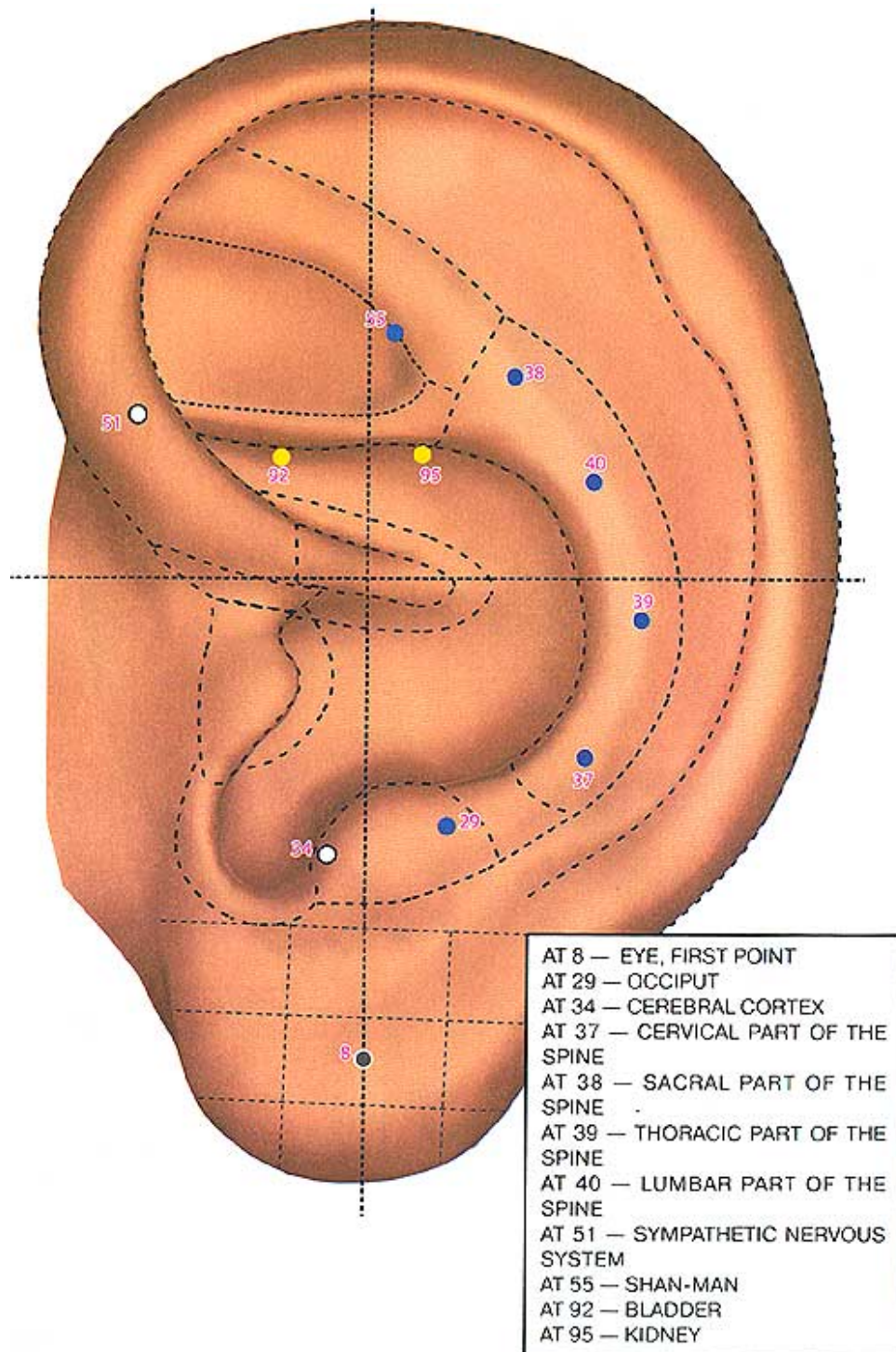
2) Stomatitis, parodontitis, parodontosis:

- AT 2, AT 3, AT 84, AT 13, AT 97.



**14. The most frequently used auricular points in children's diseases**

- 1) Infantile cerebral paralysis:
  - AT 55, AT 8, AT 51, AT 37, AT 38, AT 39, AT 40, AT 29, AT 34.
- 2) Neurotic stuttering (logoneurosis):
  - AT 55, AT 8, AT 51, AT 37, AT 29, AT 34.
- 3. Enuresis:
  - AT 29, AT 51, AT 34, AT 92, AT 95, AT 55.





[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

# CHAPTER 7

## AURICULOTHERAPY USING THE DIADENS DEVICES IN SOME EMERGENCY SITUATIONS

### 1.The most frequently used auricular points in lesions and in sports medicine

1) Contusion, sprains, microruptures of ligaments, tendons and muscles, joint dislocations:

- AT 26a, AT 55, AT 25 and AT corresponding to the contusion area with the same name.

2) Bone fractures:

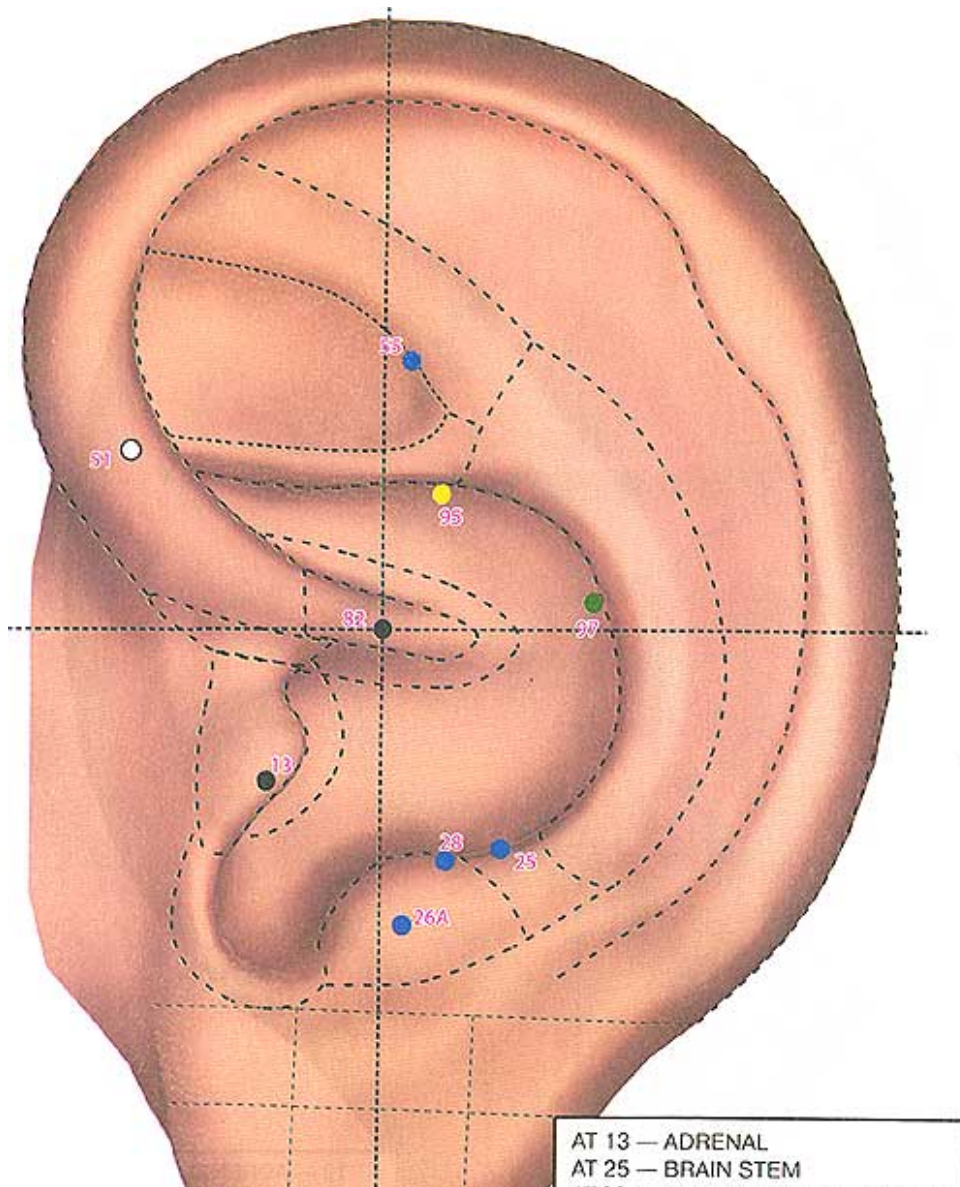
- AT 26a, AT 55, AT 25, AT 51 and AT corresponding to the fractured area and with the same name as the fractured bones.

3) Wounds:

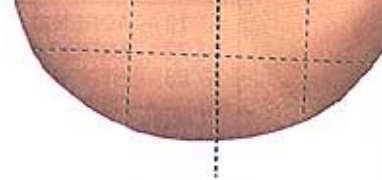
- AT 13, AT 55, AT 82, AT 71 and AT corresponding to the fractured area and with the same name as the fractured bones.

5) Burns:

- AT 13, AT 55, AT 95, AT 97, AT 82, AT 28 and AT corresponding to the burned area and with the same name.



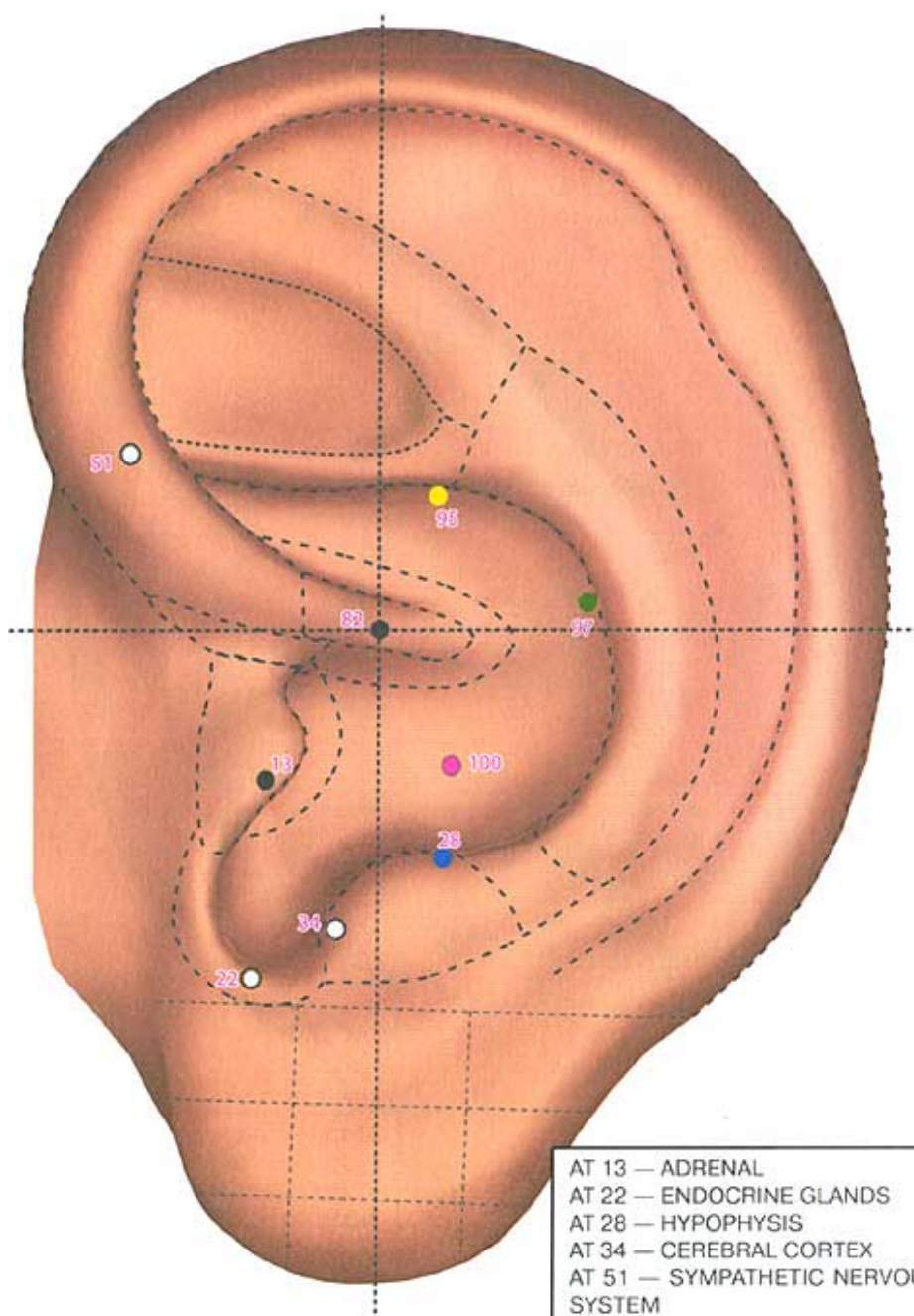
AT 13 — ADRENAL  
AT 25 — BRAIN STEM



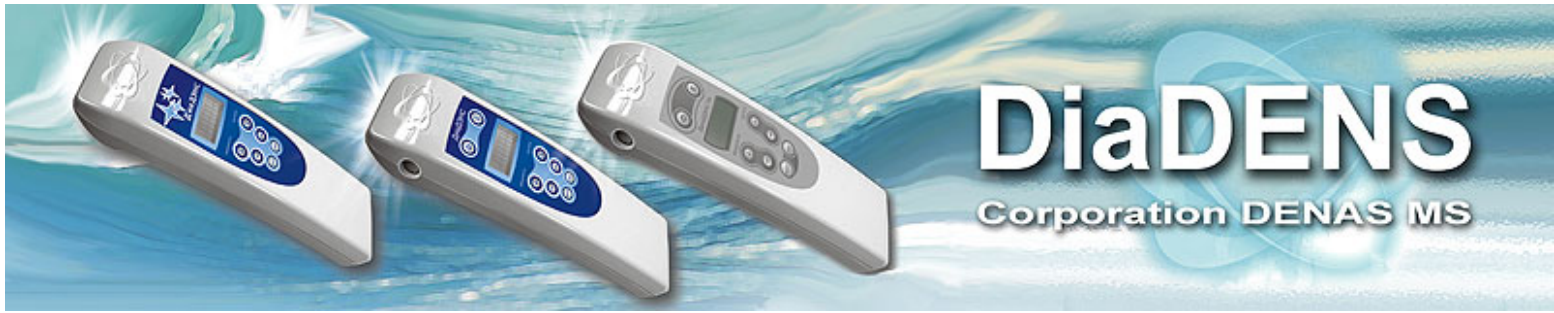
AT 25 — BRAIN STEM  
 AT 26a — THALAMUS (Hypothalamus  
 excitation point)  
 AT 28 — HYPOPHYSIS  
 AT 51 — SYMPATHETIC NERVOUS  
 SYSTEM  
 AT 55 — SHAN-MAN  
 AT 82 — DIAPHRAGM (NULL POINT)  
 AT 95 — KIDNEY  
 AT 97 — LIVER

**2. The most frequently used auricular points in some emergency conditions**

- 1) Unconscious patient (uncertain situation):
  - AT 13, AT 100, AT 82.
- 2) Fever (high body temperature):
  - AT 28, AT 13, AT 95, AT 34, AT 97.
- 3) Shock:
  - AT 13, AT 22, AT 51, AT 100, AT 34.



AT 13 — ADRENAL  
 AT 22 — ENDOCRINE GLANDS  
 AT 28 — HYPOPHYSIS  
 AT 34 — CEREBRAL CORTEX  
 AT 51 — SYMPATHETIC NERVOUS  
 SYSTEM  
 AT 82 — DIAPHRAGM (NULL POINT)  
 AT 95 — KIDNEY  
 AT 97 — LIVER  
 AT 100 — HEART, RIGHT KIDNEY



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

**Representative in USA**

John R. Pietras & Associates, Inc.  
P.O. Box 3131  
Palm Springs, CA 92263-3131  
United States -- (888) 709-9457  
[jjjppp@verizon.net](mailto:jjjppp@verizon.net)

If you have skype please push this button



# THERAPY PROGRAM

The THERAPY program is intended for emergency aid, the elimination of acute sources of complaints, and treatment of acupuncture points, using in-built and external electrodes for THERAPY of points or zones, and paraorbital electrodes.

The THERAPY program in the device operates at frequencies of 20, 60, 77, 140, and 200 Hz. For recommendations concerning the choice of therapeutic frequencies see "Ranges of Energy exposure and Their Selection(p.)and "Frequencies of Electricimpulse and Their Selection,"(p.).

In order to set the mode of the THERAPY program, carry out the following steps:  
Switch the device on.

Select the frequency of 20, 60, 77, 140, or 200 Hz, pressing FREQUENCY+ to increase the frequency, and FREQUENCY - to decrease the frequency. When the device is switched on, the automatic frequency value is set at 77 Hz. If the intention is to use the in-built electrode, place the electrode on the relevant zone. When operating external electrodes for points or zones, insert one of the electrodes into the corresponding socket on the right-hand side of the device, and place the electrode onto the skin.

Select the power of influence as shown in the section entitled "Range of Energy exposure and Their Selection" (Chapter 1, Section 2).

The duration of treatment in the THERAPY program application in the direct projection of pain or functional disease is determined by the patient's reaction:

- the complaint subsided fully;
- the patient feels considerably better;
- the skin under the electrode becomes bright red, the patient experiences a feeling of "gooseflesh", warmth or lightness;
- the patient falls asleep.

The duration of influence on latent Trigger zones amounts to 1 to 5 minutes



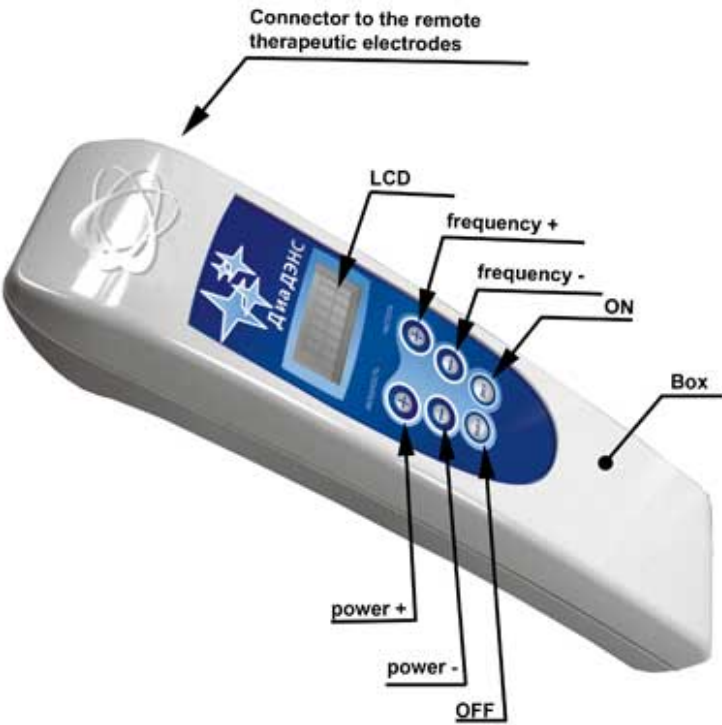
[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

# CHAPTER 1 DIADENS DEVICES

## 2. INFORMATION ON THE SPECIFICS OF USING THE DIADENS DEVICE

### Appearance of the DiaDENS devices. Control terminals

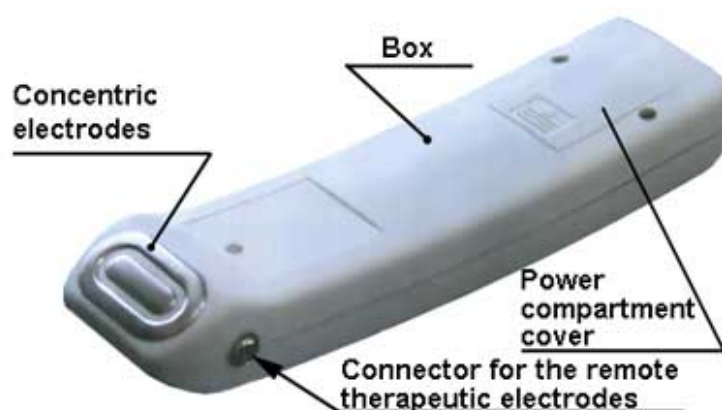
More details on the appearance of DiaDENS devices and control terminals are given in the [manual of the device](#).



Appearance of the front side of the DiaDENS-T device



Appearance of the front side of the DiaDENS-DT device



Appearance of the back side of both the DiaDENS-T and DiaDENS-DT devices



.Remote nerve-point curative electrode



## Ranges of the energy exposure and selection

The intensity of the treatment is determined on an individual basis according to each patient's subjective feelings, and is always started from the minimum level.

The intensity of electrostimulation will normally be divided into three ranges of energy exposure: minimum, comfortable, and maximum.

**The first (ER-1), minimum energy range** (at the sensation threshold) amounts to an effect of weak intensity, in which the patient feels either no sensations (pain, stinging, etc.) or feels a slight vibration. This energy range is used mostly in [TEST](#) and [SCREENING](#) programs as well as in [THERAPY](#) program for early age and preschool age children.

**The second (ER-2), comfortable energy range** (above the sensation threshold but below the pain threshold) amounts to an effect of medium intensity, in which the patient clearly feels a vibration, a pleasant stinging or burning but painless sensation. This range is used as the main DENS mode in the [TEST](#) and [SCREENING](#) programs, in the [MED](#) program, and as the main range of energy exposure in the [THERAPY](#) program.

**The third, maximum energy range (ER-3, sensations at the pain threshold)** amounts to an effect of high intensity, in which the patient feels painful stinging or burning. Such intense exposure may be followed by a spontaneous muscle contraction next to the electrode (the myostimulating effect). This energy range ([ER-3](#)) is only used in the regular [THERAPY](#) program in pronounced painful conditions in adolescent and adult patients, as well as when rendering emergency medical aid.



**NOTE! Use of the electric pulse effect at an intensity exceeding the tolerable pain threshold is not recommended.**

[ER-1](#) and [ER-2](#) exposure is used, as a rule, in the head, neck and chest areas; [ER-2](#) and [ER-3](#) is used in the area of abdomen, back and the extremities. During treatment, the level of intensity of the electrostimulation may be increased or decreased depending on changes in the patient's sensitivity as well as any elimination of the pain syndrome. Thus, in moderately pronounced disorders of the peripheral nerve functions, for example (numbness, paresthesia, paresis), [ER-1](#) and [ER-2](#) exposure should be used, whereas in cases of obvious pain [ER-3](#) is appropriate.

## Frequencies of Electric Impulse Application and Their Selection

The [TEST](#) and [SCREENING](#) programs, as well as the [MED](#) program are always applied at the frequency of 10 Hz. DiaDENS devices can be used at frequencies of 20, 60, 77, 140 and 200 Hz for therapeutic purposes.

**20 Hz Electric Impulse Frequency** is recommended for internal organ diseases, in subacute and remote trauma periods, to treat post-surgery pains, for tooth extraction, etc., to influence the direct pain projection, any segmental or [Trigger zones](#) and acupuncture points on the body and the auricle. During the application of the device at a frequency of 20 Hz, the anesthetizing effect in most patients is achieved within 15-20 minutes of DENS procedure and remains pronounced for a period of 3-5 hours.

**60, 77, 140 Hz Electric Impulse Frequencies** are recommended for influencing the direct pain projection zone, damaged areas and functionally diseased areas, any segmental or [Trigger zones](#), and acupuncture points on the body and auricle. During the application of the device at such frequencies, the anesthetizing effect is achieved faster (usually within 3-5 minutes), but remains relatively unstable and may regress almost fully within 60-90 minutes following the DENS procedure.

**200 Hz Electric Impulse Frequency** is used for pronounced pain syndromes related to pathology of the locomotive system (which includes following acute traumas) and the peripheral nervous system. It is applied in direct complaint projection zone. The effect can be observed within the first several minutes and continue for a period from several minutes to an hour. To improve the anesthetizing effectiveness, after the pain subsides at 200 Hz, additional treatment is advised at 20, 60, or 77 Hz.

## Apparatus working methods

**Stationary** - when the electrodes remain immobile on the skin surface for the duration of the action exerted upon the suggested area.

**Labile** - when the inbuilt electrodes of the device are moved smoothly over the suggested operating area, without breaking contact with the skin surface, at a velocity of 0.5 to 2-3 cm per second.

**Stationary-labile** - when the device's electrodes can be held for some time in specific skin areas.

Only [stationary TEST](#) and [SCREENING](#) and [MED](#) programs can be applied. In the [THERAPY](#) program all the modes ([stationary](#), [labile](#) and [stationary-labile](#)) can be used.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 2

# DIAGNOSTIC CAPABILITIES AND OPERATION MODES OF DIADENS-T AND DIADENS-DT DEVICES

### 2. PURPOSE AND APPLICATION OF SCREENING PROGRAM

The SCREENING program is intended for the rapid assessment of homogeneity of electrical resistance of the skin zone (ERSZ) before and after DENS treatment. One measurement of the surface resistance of the skin is made within the first five seconds after the device is applied.

The energy range is either minimum ([ER-1](#)) or comfortable ([ER-2](#)). The treatment method is [stationary](#) (electrodes are moved to another position after an audio signal sounds). The SCREENING program operates at frequency of 10 Hz. Only in-built electrodes are used in the process.

To enter the SCREENING program, switch on the device. Press FREQUENCY- button repeatedly until the word SCREENING appears on the screen. Place the electrodes onto the selected skin zone. Set the level of intensity by pressing the INTENSITY\* button until the patient experiences a light pleasant tingling sensation.

Upon application of electrodes on the skin surface the device automatically starts to measure the change in electrical resistance on the skin in this zone in response to the impulse of the device.

After the measurement process the device emits a short audio signal and shows the measurement results on the screen in the form of ALT index (from 0 to 100). Write down the shown number and move on to diagnostics of the next zone.

Latent [Trigger zones](#) are the skin zones where the ALT value is significantly different from the mean value on both sides. After assessing the value of the zone, the affected zones should be treated in the [THERAPY](#) program for a period from 3 to 5 minutes at frequencies of 60 or 77 Hz at the second (comfortable) intensity level.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 2

# DIAGNOSTIC CAPABILITIES AND OPERATION MODES OF DIADENS-T AND DIADENS-DT DEVICES

### 3. PURPOSE AND APPLICATION OF FOLL PROGRAM

The FOLL program is relatively new; it appears in DiaDENS-DT to optimize the [THERAPY](#) protocol and to assess the dynamics of change achieved during the treatment process. This is a variant of acupuncture assessment of energy meridians and the state of bodily organs and systems.

The method is also intended to test and select medications, homeopathic remedies and nutrient supplements.



**NOTE! This program is intended to assess the functional state of internal organs and systems and not to diagnose the disease.**

#### General Information on Foll Method

The method was suggested by the German researcher R. Foll in the mid-20th century; it is based on measurement of the current force at acupuncture points expressed in standard Foll units (from 0 to 100 units). In his diagnostics Foll used several hundreds of acupuncture points (called measuring points, ("MPs")), located on the 12 classical Chinese meridians and on 8 new meridians as set out by Foll (the lymphatic system, joint degeneration, connective tissue degeneration, the central nervous system, allergy, the skin, fatty degeneration, parenchyma degeneration and epithelium degeneration).

To obtain valid results using the Foll method, it is necessary to observe a number of obligatory requirements, including the optimum humidity of the skin, and the removal of any metallic attire. There are some requirements for the premises where the procedure is held. There should be no x-ray installations or sources of electromagnetic radiation nearby, or any sources of static electricity. To eliminate diagnostic errors, Foll recommended that three measurements of the same area be carried out, as well as 3 or 4 points of the same meridian.

It should be noted that Foll attached great importance to the operator being familiar with the pattern of the meridians. In addition, he advised that the physician should speak with the patient, paying attention both to the patient's complaints, and to morphological changes which always give valuable information for diagnostics (pain, changes in the skin, nails etc.).

DiaDENS devices offer several application techniques for the Foll method.

- Express diagnostics - estimation of the functional condition on end points of energy meridians (see picture below)- for tentative assessment at home;
- Detailed study of energy meridians with the "falling pointer" effect;
- Testing of medications;
- Estimation of the functional condition of meridians in control points and others points\*.

\* Techniques of diagnostics on control and other points of various channels are described in detail in the literature on this subject. Device operation does not differ from the express assessment technique as shown below, but it requires that the operator be theoretically and practically prepared for this diagnostics; some theoretical and practical issues thus fall out of the scope of the present manual.



### Preparation for testing

For two days prior to the tests, the patient should discontinue taking any restorative preparations, drinks or medications. It is also recommended that the patient does not drink or eat for two hours before the tests. It is desirable that the patient relax for about 15 minutes in the comfortable atmosphere before the testing commences.

Testing should not be carried out in near sources of high frequency electromagnetic fields (such as cell phones, pagers, microwave ovens, TVs, irons, etc.). The patient must remove any jewelry, glasses, and watches. During examination, the patient should sit or lie down comfortably.

**NOTE! During the tests, the operator must not touch the patient with both hands at the same time.**

To enter the FOLL program, switch on the device, plug in the diagnostic electrodes to the corresponding port and press F button.

**NOTE! The patient must hold the passive electrode in the hand opposite the side being tested (for example, while testing the left hand or the left foot, the passive electrode must be placed in the right hand of the patient and vice versa).**

### Express Assessment of the Functional State of Energy Meridians

Before each application the tip of the electrode must be moistened by a water-soaked cotton-wool pad. Place the electrode on the projection of the measurement point, gradually increasing the pressure until stable figures appear on the display screen. Write down the obtained measurements in the special form.



**NOTE! When measuring resistance of points on the fingers and the toes, place the electrode at an angle of 45 degrees to the skin surface.**

Data Analysis: normal values amount to 50-65 Foil Units, which shows that the meridian is in a balanced condition. Values higher than 65 units indicate power overflow, and values lower than 50 units indicate a lack of power on the selected meridian. During the express diagnostics, we measure 40 control points (on palms and feet) in twenty meridians. Some points show the functional capacity of organs (for example, meridians of the heart and kidneys), while some show the condition of bodily systems (meridians of blood circulation, or the endocrine system); others show the condition of tissues and metabolism processes (meridians of connecting tissue and fatty degeneration). The reasons for the deviation in figures for measurement points at each meridian are shown in Table 1.

**Table 1**  
**Possible Reasons for Deviation of Measurements from Normal Values**

Meridians	Possible Reasons for Deviation of figures for measurement points
Lung P (I)	Dysfunctions, diseases and pathological states of the respiratory system, veins and arteries of the upper extremities.
Colon GI (II)	Dysfunctions, diseases and pathological states of the coecum, transverse colon, sigmoid intestine, rectum and appendix, amygdalas, nasal cavities, elbow and shoulder joints.
Stomach E (III)	Dysfunctions, diseases and pathological states of the esophagus, the stomach, mammary glands, thyroid, parathyroid, and sex glands; talocrural, knee, coxofemoral and temporomandibular joints, arteries of the lower extremities, lingual and palatine tonsils.
Spleen and pancreas RP (IV)	Dysfunctions, diseases and pathological states of the spleen and the pancreas; blood, retro-perineal and chest lymph nodes, talocrural and coxofemoral joints.
Heart • (V)	Dysfunctions, diseases and pathological states of the heart: valves, myocardium, endocardium, pericardium, and the conduction system.
Small Intestine IG (VI)	Dysfunctions, diseases and pathological states of the duodenum and the small intestine, the anterior lobe of the hypophysis, vestibular cochlear nerve, the outer ear and the auditory meatus; shoulder and elbow joints, and the cervical section of the spine.
Bladder (urinary and reproduction system) V (VII)	Dysfunctions, diseases and pathological states of the urinary and the reproductive system, talocrural and knee joints.
Kidneys R (VIII)	Dysfunctions, diseases and pathological states of kidneys, the renal duct, the rectum, various branches of nervus vagus, and the sternoclavicular joint.
Pericardium (vascular system) MC (IX)	Dysfunctions, diseases and pathological states of the blood circulation system and the vascular system (arteries, veins, lymphatic vessels); shoulder and elbow joints.
Triple heater (endocrine system) TR (X)	Dysfunctions, diseases and pathological states of endocrine and excretory glands (thyroid, parathyroid, hypophysis, epyphysis, adrenal glands, the pancreas, the mammary glands and the sex glands).
Gall bladder VB (XI)	Dysfunctions, diseases and pathological states of the gall bladder and gall ducts; bone marrow; various brain sections; the trifacial nerve; the eye; talocrural and coxofemoral joints.
Liver F (XII)	Dysfunctions, diseases and pathological states of the liver (chronic hepatitis, cirrhosis, fatty degeneration) ; sex glands, veins of lower extremities, knee joints.
Lymphatic System LY(1)	Dysfunctions, diseases and pathological states of the thoracic and the right lymphatic ducts; vegetative nervous system, thyroid and thymus glands, tonsils, sinuses, larynx; lungs; heart; pharynx, esophagus, intestinal tract, liver and gall ducts.
Nervous degeneration (nervous system) Dg(2)	Dysfunctions, diseases and pathological states of various sections of central and peripheral nervous systems (vegetative-vascular dystonia, primary degenerative diseases, inflammatory diseases of the nervous system and their consequences, developmental defects, and tumours).
Allergy Dg (3)	Allergy-related dysfunctions, diseases and pathological states of bodily system.
Parenchyma and epithelium degeneration Dg(4)	Dysfunctions, diseases and pathological states of the parenchyma (working cells) and epithelium of various organs of the body.
Joint degeneration Dg (5)	Dysfunctions, diseases and pathological states of cartilages of all joints.
Connective tissue degeneration Dg (6)	Changes in this meridian indicate replacement of specific (working) cells of organs and tissues with connecting (non-working) tissues in various parts and organs of the body, including polyps and papillomas.
Skin Dg (7)	Changes in this meridian indicate skin pathology (inflammation, allergy, scarring tissue at various localisations, etc.).

When measurements show deviations from normal values, the DENS treatment protocol should include treatment of organs and systems with distorted energy levels regardless of the complaints.

To assess the activity of pathological processes in organs and systems of the body, a detailed examination of energy meridians must be carried out using the "index decrease" effect.

### Detailed Examination of the State of Energy Meridians Using the "Index Decrease" Effect

To obtain the maximum value, do not remove the active electrode from the measuring point. Without increasing the pressure of the electrode on the skin, press the POWER+ button. The MAX= value on the screen will indicate the maximum value, after which the device will automatically take two measurements one second apart, showing the difference between the current and the maximum values, taking the indication into consideration. The data will be shown on the screen for 3-4 seconds.

Enter the value into the special form (the diagnostic card) to hold an analysis.

Then the device will return to its initial state and show the FOLL message on the screen; after which, the value of the next point can be measured.

It is recommended that the same point should not be measured more than three times in a row because measurements distort the blood flow dynamics at the point of measurement and the indicated values will have no diagnostic significance.

**Analysis of Results:** the difference between the maximum measurement and the consequent measurements should not exceed 5 units (regardless of the measurement sign). When the difference exceeds 5 points, this indicates activation of pathological processes in the organs included in the meridian.

In addition to estimating reference values of measurements at end points and registration of the "index decrease" effect, it is important to compare reference values of measurements in end points of each meridian on the right and left palm and foot. The asymmetry of these measurements will indicate a misbalance in the functions of corresponding organ or tissue systems.

Deviating parameters in points of measurement indicate that DENS procedures should include treatment of all organs and systems with distorted energy values.

### Medicated testing

Initial testing of current intensity should commence with the measurement of initial values in Foil units at the end points of all meridians. Then the tested substance - in packaged form (testing tube, blister package, paper package) - must be placed in the contour of the passive diagnostic electrode, and the measurement should be repeated at the same points.

By comparing the obtained measurements, the influence the substance will have on the meridians under observation can be concluded.

If necessary, other substances can be tested subsequently.



**NOTE! Do not place unpacked samples inside the passive electrode as it is not recommended to wash the electrode, and particles of the sample remaining on the surface of the electrode will affect measurement values of subsequent testing of other substances.**

**Analysis of Results:** if the testing values are close to the norm or are within the limits of the norm, the tested medication will have a beneficial influence on the condition of organs within the given meridian. If measurements of the tested substance deviate from the norm in comparison with the initial data, administration of the given substance is undesirable (Table 2).

Original Value	Value After the testing Substance Is Placed on the Passive Electrode Contour	Compatibility of the Substance and the Body	Treatment Recommendations
Norm	Norm	Neutral; has no negative influence on the body	Treatment is possible
Lower than Norm	Norm	Has positive influence on the body	Treatment is beneficial
Higher than Norm	Norm	Has positive influence on the body	Treatment is beneficial
Lower than Norm	Still lower	Has negative influence on the body	Treatment is harmful
Higher than Norm	Still Higher	Has negative influence on the body	Treatment is harmful



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 2

# DIAGNOSTIC CAPABILITIES AND OPERATION MODES OF DIADENS-T AND DIADENS-DT DEVICES

### 4. PURPOSE AND PRACTICAL APPLICATION OF BIOREPER PROGRAM

The BIOREPER program is a method of functional electropuncture auricular diagnostics. The diagnostic procedure is carried out using individually selected testing power, taking into consideration the individual electrical conductivity of the patient's tissues at a given time.

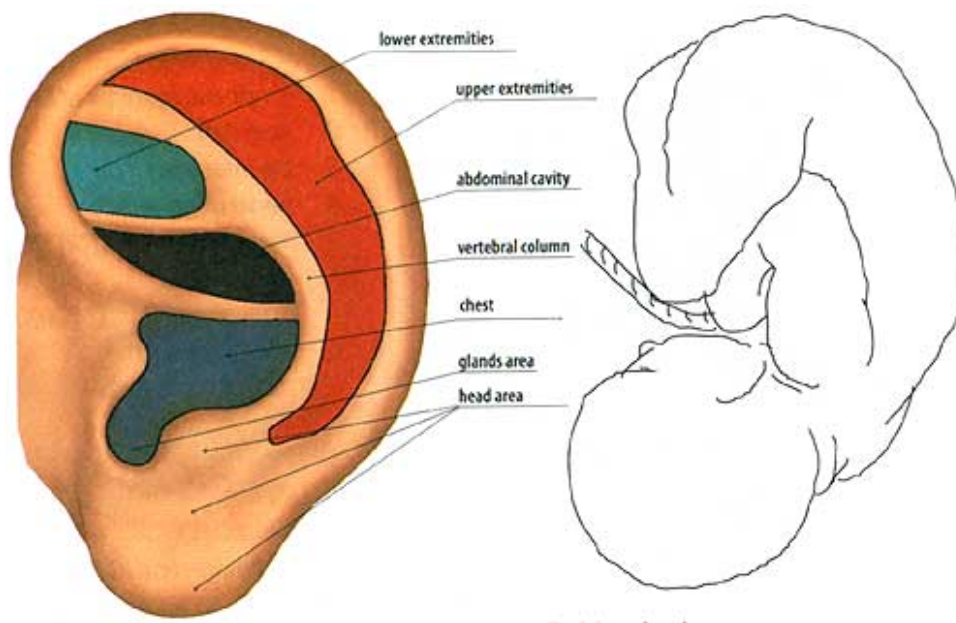
The method enables the exposure of the pathology before any symptoms appear and selection of an optimal treatment mode (primarily the DENS procedure) and the diagnostic procedure, the assessment of the functional state of the diseased organs and systems and the comparison of the findings during repeated testing.



**NOTE! This program is intended to assess the functional state of internal organs and systems and not to diagnose the disease.**

#### Historical Note

The treatises of Chinese national medicine say that the auricle is the centre of the main meridians through which the ear is connected to other organs of the body. Ancient Greeks thought that the auricle was connected to brain sections and internal organs. Doctors in many countries of the world have independently long ago established that the auricle is the point of tenderness for many ailments on the skin; cauterization or acupuncture of these points was shown to have a favorable influence on the progression of the disease. The first-ever full topographical map of points and zones on the auricle, projections of certain parts of the body and its internal organs was published by a Lyons doctor, P. Nogier in 1956. In 1969 Nogier produced an ingenious hypothesis, which was later proven to be true, when he noted that the shape of the ear resembled that of an embryo in the womb.



Almost simultaneously with Nogier's works reports were written claiming that electric resistance in acupuncture points of the body is much lower than in other points of the skin. Various electric detectors (stigmatoscopes, punctoscopes, microammeters, and ohmmeters) were designed which enabled the easy location of the precise localisation of acupuncture points on the body. Further electrometric research has shown that the auricle of a healthy person usually has no points with low resistance. After a disease develops, lower resistance is observed in zones and points of the ear that correspond to the affected organs or systems.

### **The Difference Between BIOREPER Method and Other Electropuncture Diagnostics**

This new method of electropuncture auricular diagnostics is patented under the name of BIOREPER ("bio" meaning life, and "reper" meaning the sign or spot which acts as a reference point in geodesy or as a fire adjustment point in artillery). This method considerably exceeds all other known methods of electropuncture diagnostics in terms of accuracy, reproducibility of results and concurrence with the clinical diagnosis established on the basis of officially accepted objective standards of medical examination. The DiaDENS-DT device provides users the opportunity to apply this method in practice.

Consumers' growing interest in medical devices and reflex diagnostics devices is quite clear, as their practical application allows the quick exposure of pre-clinical pathological manifestations of acute diseases, and latent symptom-free chronic pathological processes.

Methods of reflex diagnostics, while being completely harmless to the patient (as opposed to, for example, x-ray or endoscopic methods), allow for the continuous monitoring of the patient's state of health and expedient decision-making concerning the effectiveness of treatment. The reflex diagnostics method, which is based on measurement of bioelectric parameters in acupuncture points is currently the most popular, and the Foil method described above is the best known of those methods, as is also the method of Japanese doctor I. Nakatani, which is also based on the assessment of energy meridians.

The method of auricle diagnostics, which has been developing since middle of the last century, allows for the quick exposure of the centre of disease, the character and the phase of the pathological process. It helps the doctor to choose an effective medical algorithm using both auricular active points, and active points and zones on the body.

However the majority of known methods of auricular diagnostics, just as methods of meridian diagnostics, do not account for the variety of factors influencing the electrical conductivity of active points, including conductivity disorders of the skin, which may depend on a variety of external or internal conditions.

Studies held at the Federal Scientific Clinical Experimental Centre of Traditional Methods of Diagnostics, the Medical Treatment of the Russian Federation's Ministry of Health, the Faculty of Reflex Medicine and Chiropractics of Moscow State University of Medicine and Dentistry offer the community of electric reflex diagnostics fans a new method, which appears to have none of the shortcomings of the previously used methods. The method is based on the tentative estimation of the general level of electrical conductivity in special reper points with the subsequent relative measurement of all the necessary points of concern on the auricle. This method has been nicknamed the BIOREPER method, and it enables the examination of the functions of internal organs and selection of the optimum DENS treatment protocol.

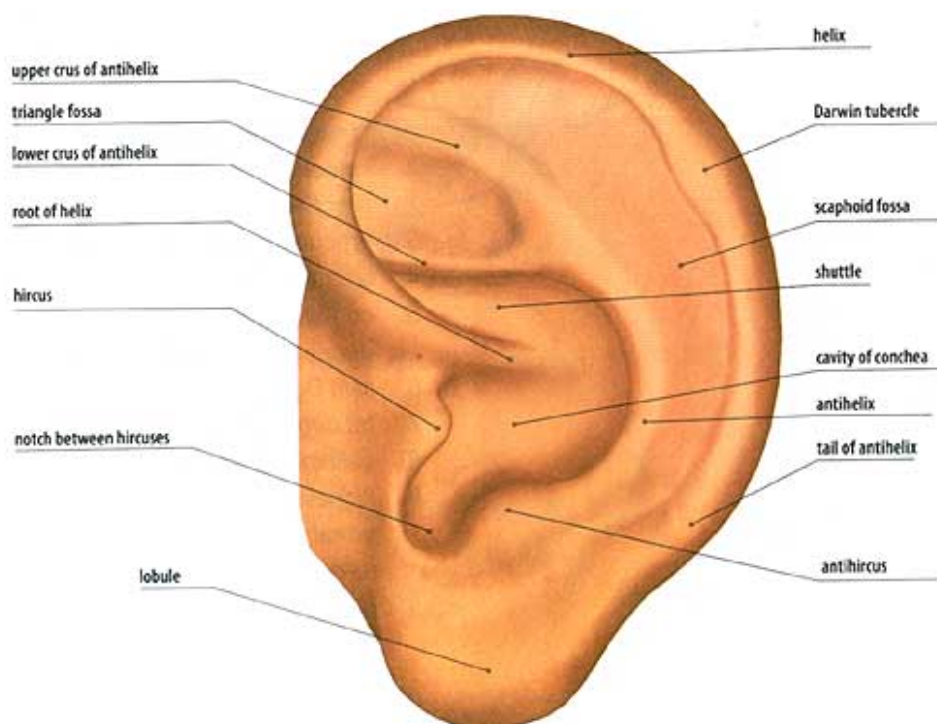
This method does not exclude the use of instrumental and laboratory methods in diagnostics of diseases, but may lead to a lessening of their role in the diagnostic process.

### **Some Notes on Physiology and Anatomy of the Auricle**

The auricle (auricula) until recently had been only as a body part which allowed a human being to capture sounds. But during the second half of the last century, many studies demonstrated that the auricle represented a special reflex or acupuncture system with internal organs and parts of the body schematically shown. At present, of the entire range of mini-acupuncture systems there are only two included in the WHO'S International Acupuncture Nomenclature. One of these two is the auricular microacupuncture system (MA in WHO terminology).

The majority of modern scientists believe that the "secret" of auricular diagnostics and auricular [THERAPY](#) consists in a particular innervation of the auricle, where numerous nerves are concentrated, including branches of the trigeminal (V) nerve, cervical plexus (C2-C3), facial nerve (VII), intermediate glossopharyngeal nerve (IX) and the nervus vagus (X).

The shape of certain parts of the ear, its size, age changes, and the difference between the right ear and the left ear are individual. However, any auricle will always have certain anatomic parts in any case.



### **Auricle Examination**

#### ***Determining the Degree of Pain Tolerance***

Aches and pains and other sensations in the auricle, the condition of the skin (such as hyperaemia (reddening of the skin), pustules or scarring), and the study of the auricle's sensitivity to pain allow to obtain valuable information on the state of organs and systems of the body.

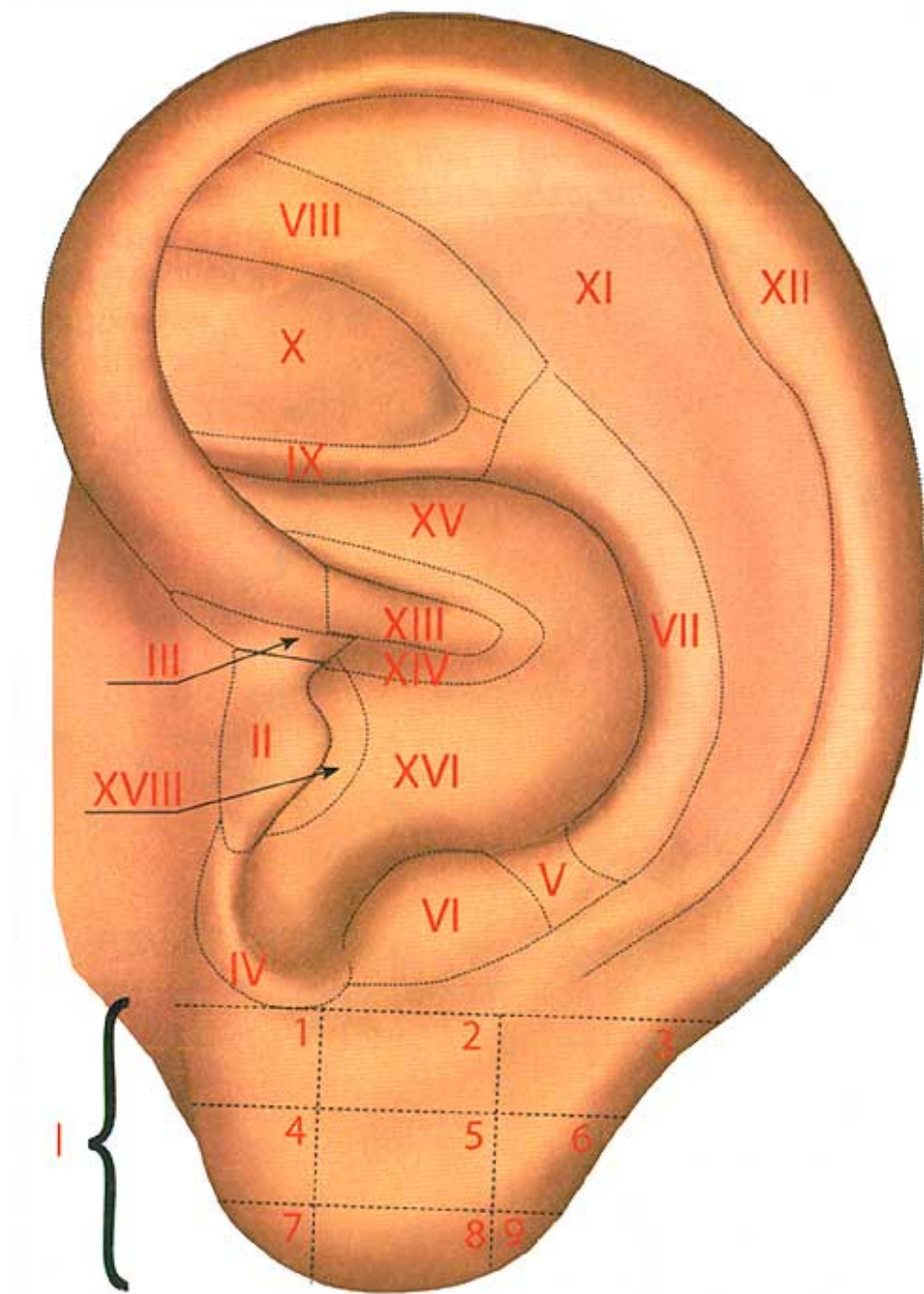
During the BIOREPER examination, special attention must be paid to points with increased sensitivity to pain. When determining the degree of the auricle's sensitivity to pain, the electrode should be held perpendicular to the skin. The pressure on the skin must be equal and even, not strong. Be careful not to allow the sensor to slide on the surface of the auricle. It is recommended to apply pressure to the point for no more than 10-15 seconds.

Points with maximum level of sensitivity must be treated in the [THERAPY](#) program at the frequency of 60 or 77 Hz in [ER-2](#) mode for 2 or 3 minutes (no more than 3 separate points per session).

#### ***Positioning of Auricular Points***

There are various coordinate systems to find auricular points (APs) on the auricle. One such system is the system of angle

(tangent) coordinates (fig. 11), based on the application of a stencil model onto the auricle and the drawing of coordinate lines. The stencil is placed along the vertical line between  $0^{\circ} \cdot 180^{\circ}$ , passing through the top point of the ear (AP 78), the zero point (AP 82) and the point in the middle of the ear lobe passing through the point of the eye (AP 8). The centre of the coordinate system is point zero (AP 82). However, the APs are most easily determined after a careful study of 18 projections, or topographic zones of the auricle. The APs can be easily located within the said zones. Each auricular zone is responsible for a particular organ or part of the body.



*The head and the face are projected on the ear lobe (zone 1).*

*The head and the brain - on the antitragus (zone VI).*

*The lower part of the head, the mouth cavity, the nasal cavity and the larynx - on the tragus (zone II) • posterior auricular groove (zone V).*

*Glands of internal secretion zones are located in the intertragic notch (zone IV).*

*The torso and the spine are projected onto the anthelix (zone VII).*

*The projection of the upper extremities is located in the navicula (zone XI).*

*The lower extremities correspond to the superior peduncle of the anthelix (zone VIII).*

*The buttocks correspond to the inferior peduncle of the anthelix (zone IX).*

*The pelvic cavity and internal sexual organs are projected onto the triangula fossa (zone 10).*

*The diaphragm is projected onto the helix crus (zone XIII).*

*The gastrointestinal tract corresponds to the zone adjacent to the helix crus (zone XIV).*

*The abdominal cavity is projected onto the cymba conchae (zone XV).*

*The thoracic cage corresponds to the cavity of the concha.*

World practice tends to refer to points as a combination of letters and numbers (e.g., AP 100 XVI - heart, or AP (XVI) 100 - heart). This means that the auricular point (AP) under number 100 is located in the XVIth zone of the auricle (concha zone) and serves to indicate the condition of the cardiovascular system; this zone also serves as the active point for correction of this state. There are a total of some 200 APs on the surface of the auricle.

This publication does not intend to inform the reader about all APs; its function is to teach you to determine the location of APs which are most often used in diagnostics and [THERAPY](#).

See chapters [6-7](#) for a more detailed discussion of the topography of auricular points most often used in diagnostics and [THERAPY](#).

### Preparation for testing

For two days before the examination the patient should discontinue taking any tonic preparations, drinks or medications. It is also recommended that the patient does not drink or eat for two hours before testing. It is suggested that the patient relax for about 15 minutes in a comfortable atmosphere before the testing commences.

The testing should not be carried out in the premises with sources of high frequency electromagnetic fields (such as cell phones, pages, microwave ovens, TVs, irons, etc). The patient must remove all jewelry, glasses, and watches. During the testing the patient should sit or lie down comfortably.



**NOTE! During the examination the physician must not touch the patient with both hands at the same time. During the testing the patients arms and legs must not be crossed or touch each other.**

Switch on the device.

Insert the diagnostic electrodes into the corresponding sockets.

To enter the BIOREPER program, press • button.

Let the patient hold the passive electrode in his or her hand.

### Determining the Individual testing Voltage

Place the active electrode in the in-tan position on the middle line between the eyebrows on the bridge of the nose.



Press and hold INTENSITY\* button. The device will automatically select the testing voltage and show the parameter in the lower right-hand corner of the screen. The lower left-hand corner will show the force of the current passing through the in-tan point.

When the force of the current passing through the in-tan point will reach 10 mkA, the upper line of the screen will show the testing voltage as  $U_T = \dots$ . This will constitute the individual voltage for the testing of the patient.

The device is ready for the diagnostic procedure, emitting the current of the specified power value.



**NOTE! Should the current ever reach the value of 10 mkA, the screen will read LITTLE CURRENT, which will mean that the in-tan point has been missed, and the active electrode must be repositioned.**

### BIOREPER testing Program

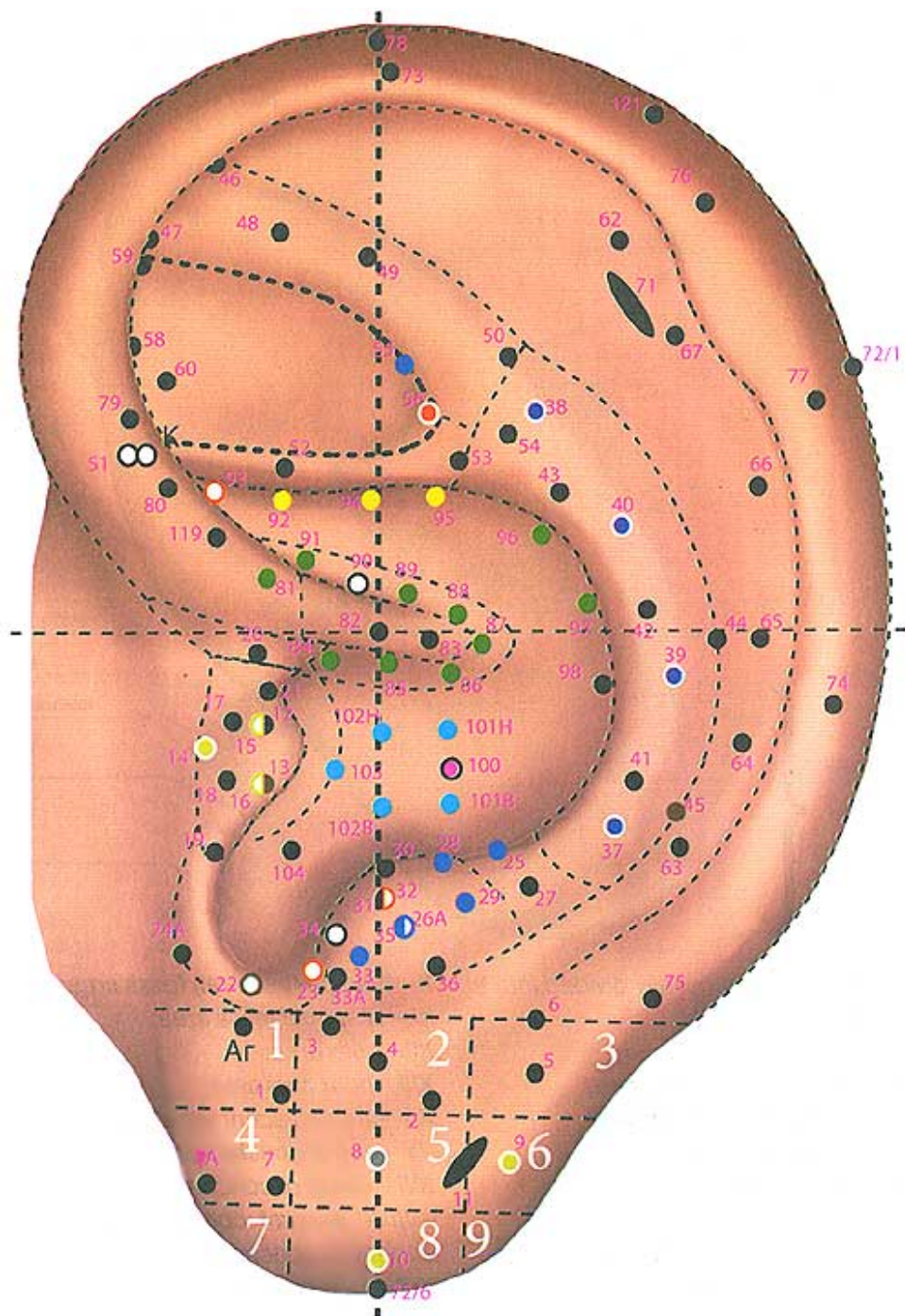
The patient must hold the passive electrode in his or her palm on the side of the auricle being tested. The active electrode is

then placed in the measuring point reflecting the state of a certain organ. The electrode must be pressed only slightly, but evenly, without allowing the electrode to slip off the point. The testing time in each point must not exceed 2 or 3 seconds. It is recommended that the value of any point should not be measured more than two times in a row.

After the diagnostic electrode touches the skin, the lower part of the screen shows the growing value of the current in mkA in the point being tested. After 1 or 2 seconds the value of the current stabilizes (freezes), thus indicating the current value in the point. After writing down the value of the point in the diagnostic card, proceed to the next point.

Analysis of Results: Following the diagnostics the values are analysed in accordance with the table found below. Based on this information conclusions are drawn on the energy levels of separate organs and a therapeutic procedure is chosen. The points showing maximum deviations from the normal value (in either direction) must be treated in [THERAPY](#) program at the frequency of 20, 60, or 77 Hz in [ER-2](#) mode for 2 to 3 minutes each (no more than 3 points per procedure). [THERAPY](#) may include influence on the points and zones on the body, using both in-built and external electrodes ([see protocols for various conditions, Chapter 6](#)).

Repeated testing may be used to assess the changes in the state of the organs.



Auricular point 1 (AP 1) - UPPER POINT FOR ANALGESIA FOLLOWING EXTRACTION OF A TOOTH - Localization: lower external corner in the first quadrant of ear lobule.  
AP 2 - PALATE - Localization: this is the upper point of the lower quarter of the diagonal of the second lobule quadrant. This diagonal connects the upper internal and the lower external corners of the lobule. AP3- MOUTH FLOOR-

Localization: the lower point of the upper quarter of the diagonal of the second lobule quadrant. (This diagonal connects the upper internal and the lower external corners of the lobule.) AP 5 - Maxilla (upper jaw)- Localization: Center of the third quadrant of lobule.

AP6 - Mandibule (lower jaw) - Localization: in the middle of the upper line at the third quadrant of the lobule.

AP 7 - LOWER POINT FOR ANALGESIA FOLLOWING EXTRACTION OF A TOOTH - Localization: lower external corner of the fourth quadrant of the lobule.

AP 8 - EYE, FIRST POINT - Localization: center of the fifth quadrant in the middle of anterior surface of the lobule of the ear.

AP 9 - INTERNAL EAR - Localization: in the center of the sixth quadrant.

AP 10 - TONSIL, FOURTH POINT - Localization: in the center of the eighth quadrant.

AP 11 - CHEEK-BONE - Localization: zone around the perpendicular separating the fifth and sixth quadrants of the lobule.

AP 13 - ADRENAL - Localization: in the center of the lower border of the tragus (or tragus apex, in case of biapical tragus) on the upper projection of the lower part of cartilage.

AP 14-EXTERNAL NOSE- Localization: in the center of the tragus base, at the anterior border of the tragus cartilage. An equilateral triangle could be composed with a line connecting AP12, AP13 and AP14.

AP 15 - PHARYNX AND LARYNX - Localization: in the center of the upper half of tragus internal surface (or tragus apex, in case of biapical tragus) near the opening of the external acoustic meatus at the AP 12 level.

AP 16 - NASAL CAVITY - Localization: on the lower half of the tragus internal surface near the opening of the external acoustic meatus at the AP 13 level.

AP 17 - THIRST - Localization: in the middle of the distance between AP 14 and the center of the upper border of the tragus.

AP 18 - HUNGER- Localization: in the middle of the distance between AP 14 and the center of the lower border of the tragus.

AP 19 - HYPERTENSION - Localization: in the middle of the distance between AP 13 and AP 24a.

AP 22 - ENDOCRINE GLANDS - Localization: in the center of the internal border of the intertragic notch.

AP 23 - OVARY - Localization: between AP 22 and AP 34 at the antitragus transition to intertragic notch.

AP 24a - VISION, second point - Localization: anterior border of the lobule transition to the intertragic notch.

AP 25 - BRAIN STEM - Localization: in the middle of posterior auricular sulcus.

AP 26a - THALAMUS (Hypothalamus excitation point) - Localization: internal surface of the antitragus symmetric to AP35, at the external surface of antitragus in the middle of its base, in the very middle of the distance between AP29 and AP33.

AP 28 - HYPOPHYSIS - Localization: in the center of the upper third of antitragus in the middle between AP25 and AP30.

AP 29 - OCCIPUT - Localization: in the middle of the upper third of the antitragus external surface just below AP28

AP 32 - TESTICLE - Localization: internal surface of antitragus 2 mm below

AP 30 - AP 32 point is symmetric to AP31 with regard to AP30 on the external antitragus surface.

AP 33 - FOREHEAD - Localization: lower third of antitragus's external surface, a little above the transition of antitragus to intertragic notch.

AP 34 - CEREBRAL CORTEX - Localization: in the middle of the lower third of the antitragus

AP35 -TEMPLE (point of Sun) - Localization: middle third of the external surface of the antitragus basis between AP29 and AP33.

AP 37 - CERVICAL PART OF THE SPINE - Localization: internal border of antihelix at its transition to the posterior auricular sulcus (zone V).

AP 38 - SACRAL PART OF THE SPINE - Localization: internal border of the antihelix at the conjunction of the antihelix crura.

AP 39 - THORACIC PART OF THE SPINE - Localization: it is necessary to draw a virtual line in order to locate this point. The virtual line should be the same in its shape as a curve of the antihelix between AP37 and AP 38. The line should be divided into 3 segments. AP39 is located at one third of distance away from AP37.

AP 40 - LUMBAR PART OF THE SPINE - Localization: 2/3 of the distance from AP37 to AP38

AP 42 - THORAX- Localization: external border of the antihelix, in the middle of the distance between AP 37 and AP 38.

AP 44 - BREAST - Localization:

AP 45 - THYROID - Localization: external border of the antihelix 2 mm below AP41 and at the same horizontal level as AP37.

AP 46 - TOES - Localization: upper point of the upper antihelix crus (at the external border)

AP 47 - HEEL - Localization: upper point at the internal border of the upper antihelix crus.

AP 48 - ANKLE JOINT - Localization: in the middle of the section between AP 47 and AP 49

AP 49 - KNEE JOINT - Localization: in the center of the upper antihelix crus.

AP 50 - HIP JOINT - Localization: antihelix transition to its upper crus. AP 51 - SYMPATHETIC NERVOUS SYSTEM - Localization: intersection of the lower antihelix crus with internal helix surface (This point may be covered with the helix).

AP 52 - SCIATIC NERVE - Localization: the center of the lower antihelix crus.

AP55 - SHAN-MAN - localization: a little higher than the upper antihelix crus divergence, below the lower border of the

upper antihelix crus above AP56.

AP56 - PELVIS IN MALE (cervix of the uterus in female) - Localization: below the antihelix crus divergence at the upper border of the lower antihelix crus under AP55.

AP 58 - UTERUS (sex point) - Localization: near the helix border in the middle of the upper antihelix crus endings.

AP 59 - THE POINT LOWERING ARTERIAL PRESSURE - Localization: the point is located in the transition of internal surface of the helix to the lower border of upper antihelix crus.

AP 62 - FINGERS - Localization: upper part of navicula at the level of auricular hillock.

AP 63 - CLAVICLE - Localization: lower part of navicula under AP 45.

AP 64 - SHOULDER JOINT - Localization: the upper point of the lower quarter of the distance between AP 63 and AP 62 in the navicula.

AP 65 - SHOULDER - Localization: in the middle of the distance between AP 63 and AP 62 in the navicula.

AP 66 - ELBOW - Localization: in the center of the distance between AP 65 and AP 67 in the navicula.

AP 67 - HAND - Localization: in the navicula at the same level as auricular hillock.

AP 71 - HIVES - Localization: between AP 62 and AP 67 near antihelix.

AP 73 - TONSIL, first point - Localization: at the helix, at the same vertical line with AP10.

AP 74 - TONSIL, second point - Localization: on the anterior surface of the helix in the middle of the distance between AP 73 and AP 10,

AP 75 - TONSIL, third point - Localization: anterior surface of the helix in the middle of the distance between AP 74 and AP 10.

AP 78 - APEX OF THE EAR - Localization: this is the uppermost point of the helix.

AP 81 - RECTUM - Localization: at the ascending branch of the helix, at the level of AP 91 (zone XIV) and a little higher than AP 20 (zone III), which corresponds to the beginning of the cartilage of ascending part of the helix.

AP 82 - DIAPHRAGM (NULL POINT) - Localization: helix crus transition to the ascending part of the helix.

AP 84 - MOUTH - Localization: under the lower border of the helix crus above the external acoustic meatus.

AP 87 - STOMACH - Localization: in fact stomach is not a point but a zone located around the basis of the helix crus near the concha, between cym-ba conchae and cavum conchae.

AP 88 - DUODENUM - Localization: at the upper border of the helix crus above AP87 along the beginning of the crus.

AP 89 - SMALL INTESTINE - Localization: at the upper border of the helix crus above AP88 and along the crus.

AP 91 - LARGE INTESTINE - Localization: at the upper border of the helix crus near its transition to the ascending branch of the helix, above AP82.

AP 92 - BLADDER - Localization: under the lower border of the lower antihelix crus above AP 91 and behind AP93.

AP 93 - PROSTATE - Localization: in the corner formed by the ascending branch of the helix and lower border of the lower antihelix crus below AP51 (this point may be covered with the helix).

AP 94 - URETER- Localization: in the middle of the distance between AP 92 and AP 95.

AP 95 - KIDNEY - Localization: below the lower border of the lower antihelix crus, under AP 53 and above AP89.

AP 96 - GALL BLADDER (right ear) and PANCREAS (left ear) - Localization: in the upper external corner of the concha and under the lower border of the lower antihelix crus beginning above AP88.

AP 97 - LIVER - Localization: near the internal antihelix border below AP96 at the level of helix crus and AP40

AP 100 - HEART, RIGHT KIDNEY - Localization: in the center of the concha, at the level of the external acoustic meatus, in the most concave part of the concha.

AP 101 - LUNG- Localization: It is supposed to be 2 points conventionally 1mm above AP100 and 1mm below it. In fact there is lung zone around AP100.

AP 102 - BRONCHI - Localization: 2 points located in 2 mm from AP101 in the line of the external acoustic meatus,

AP103 - TRACHEA - Localization: 2 mm from AP102 in the line of the external acoustic meatus, at the internal border of the concha, at the level of the middle part of the posterior border of the external acoustic meatus, at the same horizontal level as AP100.

AP 121 - LESSER OCCIPITAL NERVE - Localization: on the internal surface of the helix; 2 mm above the auricular hillock.

**Table 3**  
**Current Values in Auricular Points (APs) In Terms of Degree of Intensity and Direction of Functional Changes in Organs Under Examination**

Current value in APs in mkA	< 1	1	2-3	4-7	8-11	12-15
Degree of Intensity of Pathology	Moderate and Expressed	Slight	Normal	Slight	Moderate	Expressed
Functional Change Direction	Hypofunction		Normal	Hyperfunction		



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 3 THERAPEUTIC CAPABILITIES AND FUNCTIONING MODES OF DIADENS DEVICES

### 2. MED PROGRAM

The MED (minimum effective dose) program is the microcomputer program applied for prophylactics in anticipation of heavy physical or intellectual strain, following physical or intellectual strain, in cases of chronic fatigue syndrome, lack of wakefulness in the morning, sleepiness during the day, lack of attention and concentration, and for prevention of colds during epidemics. MED allows the body to improve its adaptability. During the administration of the treatment protocol, the MED program is applied once per treatment session.

The MED program works at a frequency of 10 Hz and consists of [TEST](#) program treatment on the selected point, after which the device is automatically switched to the [THERAPY](#) program and continues stimulating the point at a frequency of 10 Hz for another 5 minutes in the [stationary](#) mode.

To enter the MED program, carry out the following steps:

Switch on the device.

Set the frequency to 10 Hz by pressing the FREQUENCY - button until the value F 10 appears.

Place the in-built electrodes onto the skin (e.g. the [he-gu zone](#), [ju-san-li](#), or any other zone.)

Set the frequency as shown above ([see Chapter 1, Section 2](#)).



**NOTE! Do not move the electrodes on the skin while operating in the MED program!**

After the power capacity has been reached, the WAITING message will change to the 1st phase of the MED program, [TEST](#). Having stabilised the skin impedance of the skin under the electrode, the device emits an audio signal, and the time of the treatment on the point will appear for several seconds in the top line of the screen. The next stage of the MED process consists of an on-going stimulation of the point for a period of 5 minutes (the screen will display the [THERAPY](#) message and show the treatment time on the point). After 5 minutes the device will emit the audio signal and the MED program will stop.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

# CHAPTER 4

## DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS

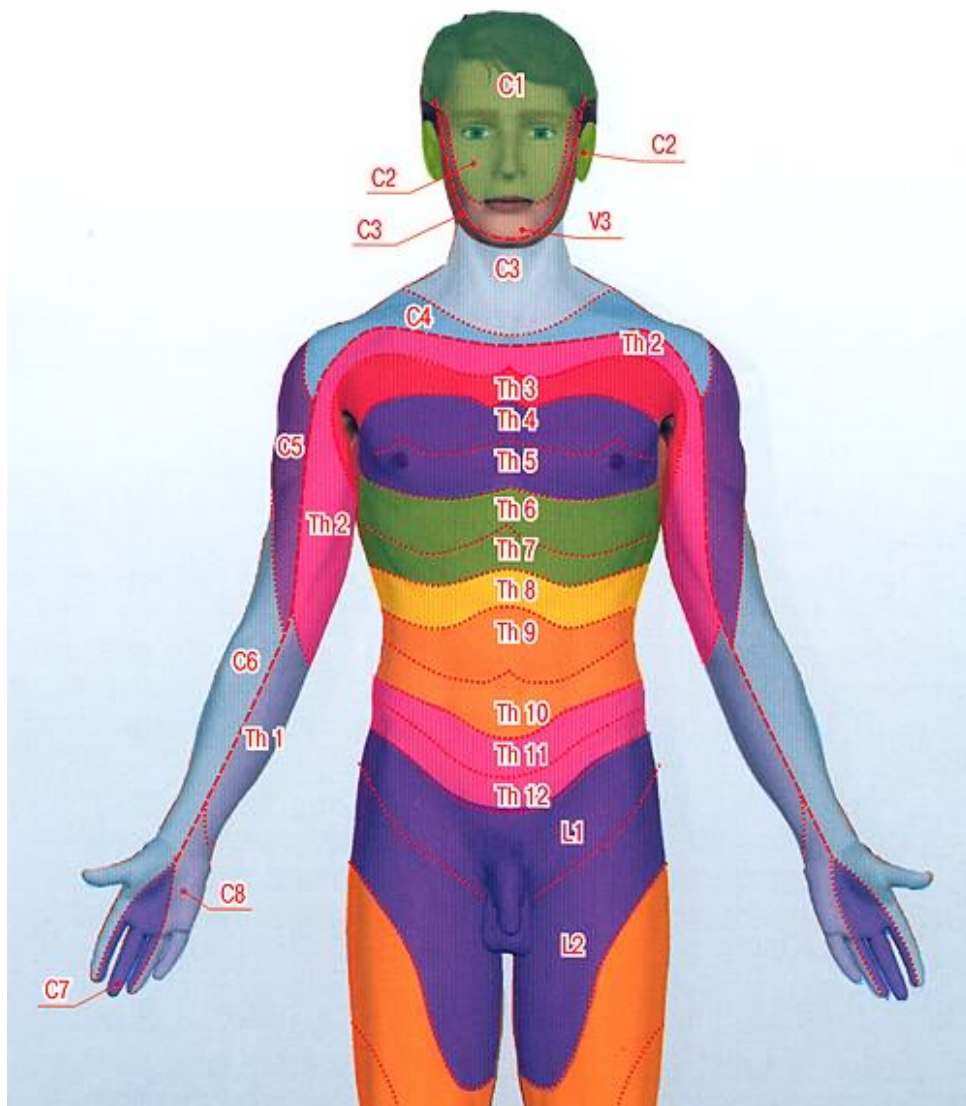
### 2. SEGMENTAL ZONES

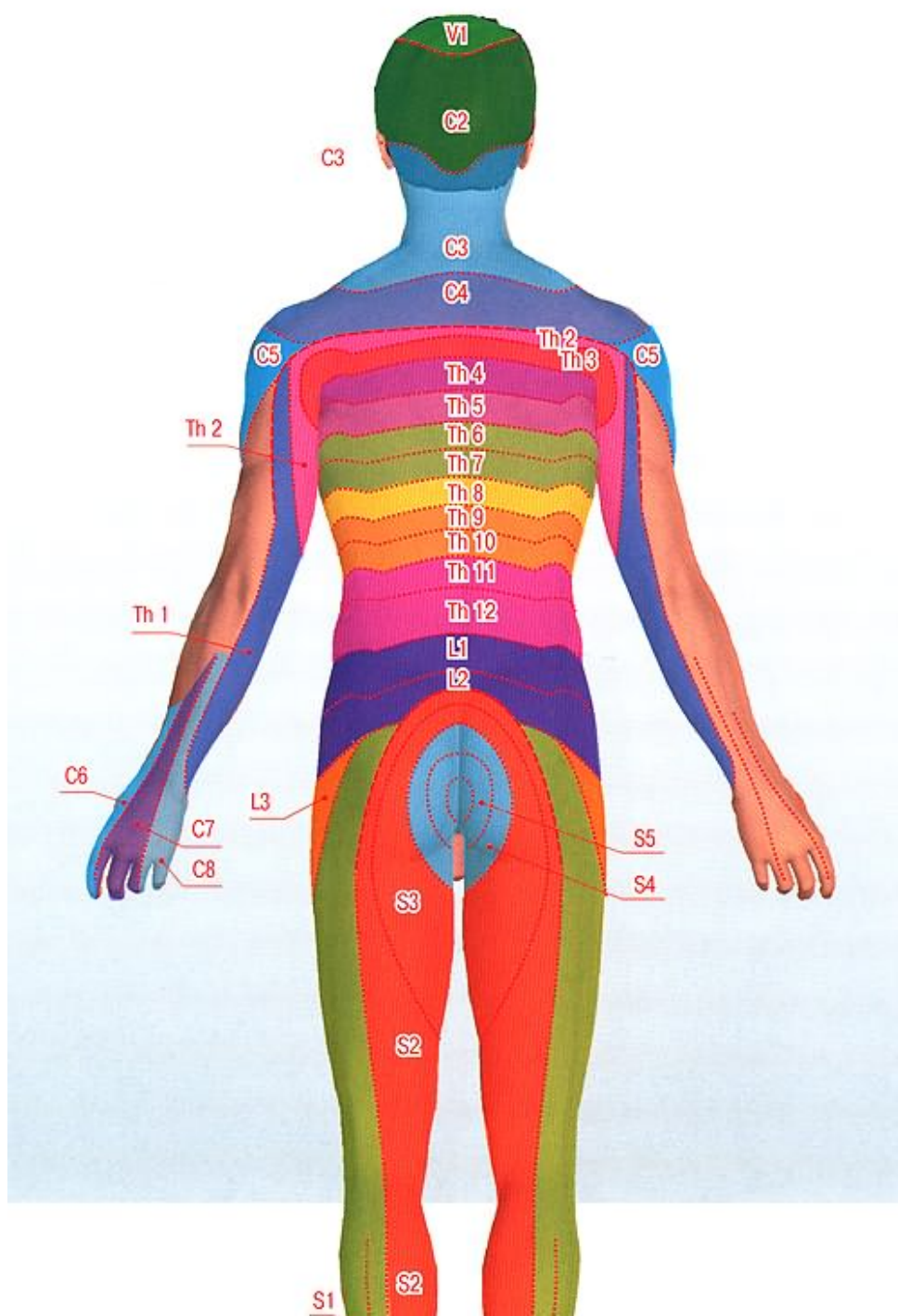
Segmental zones can be included in the treatment procedure in any diseases or pathological processes to increase the effectiveness of the DENS procedure.

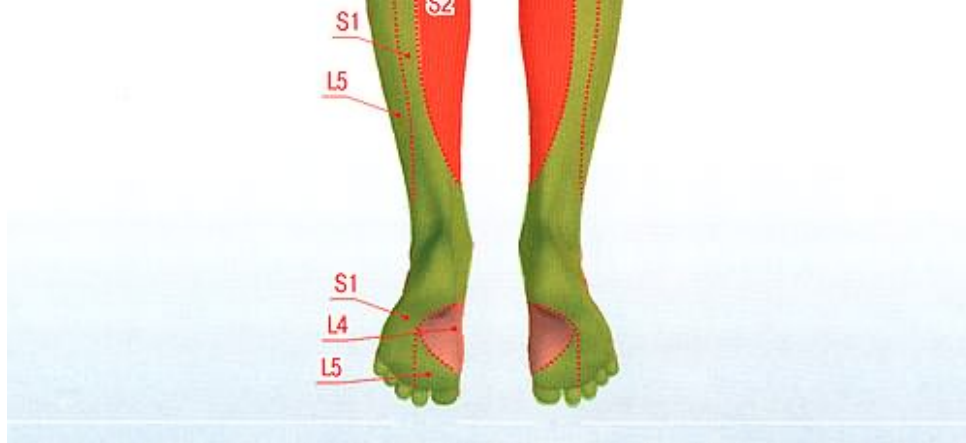
Segmental zones can be conditionally divided into zones of particular and universal trends.

#### Segmental Zones of Particular Applications

Treatment of segmental zones of particular application is geared toward regulation of functions of certain organs (such as liver, kidneys, prostate, etc.).







Segmental skin zones of particular application (hereinafter, segmental zones) are signified by letters and numbers. There are 8 cervical segmental zones (C1-C8), 12 thoracic zones (Th1-Th12), 5 lumbar zones (L1-L5), and 5 sacral zones (S1-S5). Segmental zones can be represented as transverse rings on the body, hence the term "segmental ring zone," often found in special literature. On the extremities the segmental zones are represented as lateral bands.

**Table. Segmental zones recommended for treatment in "THERAPY" programme. Listed by complaint, symptoms, condition and disease.**

Complaints, symptoms, conditions and diseases	Segmental zone
<ul style="list-style-type: none"> <li>- Headache, dizziness, cerebral oedema, arterial hypotension;</li> <li>- Noise and ringing in the ears, deaf-mutism, speech disorders (aphonia, dysarthria, aphasia);</li> <li>- Eye diseases;</li> <li>- Pain and oedema of mucous membrane in throat and nose, chronic rhinitis (coryza), disorders relating to sense of smell, nasal haemorrhages;</li> <li>- Tension of occipital muscles, torticollis, tension and poor mobility of the spine muscles, pain in the shoulder area, paralysis of the upper limbs;</li> <li>- Mental diseases, neurasthenia, hysteria.</li> </ul>	•1-•2
<ul style="list-style-type: none"> <li>- Headache, dizziness, cerebral oedema, arterial hypotension;</li> <li>- Noise and ringing in the ears, speech disorders (dysarthria, aphasia), pharyngitis, laryngitis, disorders relating to sense of smell;</li> <li>- Face oedema, tension of occipital muscles, headache in the back of the head, torticollis, pain in the shoulder area, in the back, in the small of the back, paralysis of upper extremities;</li> <li>- Pain and oedema of mucous membrane in throat, chronic rhinitis (coryza), sense of smell disorders, nasal haemorrhages;</li> <li>- Eye diseases;</li> <li>- Mental diseases, neurasthenia, maniacal conditions.</li> </ul>	•3-D1
<ul style="list-style-type: none"> <li>- Migraine and other head aches, dizziness, poor memory, asthenia, hyperhydrosis;</li> <li>- Feeling of tension in the spine, spasm of muscles in the neck and back (contracture), tension of muscles in the back of the head, pain in the area of scapula, pains in the knee, pain in joints, paralysis of upper extremities;</li> <li>- Sensation of heart palpitation (tachycardia);</li> <li>- Bronchitis, bronchial asthma;</li> <li>- Susceptibility to catarrhal illnesses, coughing, rhinitis, pleurisy, influenza;</li> <li>- Neurasthenia, psychoses, hysteria, fear, anxiety.</li> </ul>	D1-D2
<ul style="list-style-type: none"> <li>- Pain and muscle tension in the area of the back, small of the back, shoulder, back of the head, torticollis, intercostal neuralgia;</li> <li>- Cold, cough, bronchitis;</li> <li>- Urticaria fever;</li> <li>- Decreasing or absence of skin sensitivity in the shoulder and bend of elbow.</li> </ul>	D2-D3
<ul style="list-style-type: none"> <li>- Diseases of the spinal cord and brain;</li> <li>- Disorders of mobility in the area of neck, muscle tension in back of the head;</li> <li>- Pain in the area of external surface of shoulder, scapula, chest, in the area of waist, abdomen, lumbodinia, pain in sacrum and the back;</li> <li>- Frequent coughing, chronic tracheitis, bronchitis, pneumonia, bronchial asthma;</li> <li>- Nosebleeds, nausea, vomiting;</li> <li>- Mental disorders, neurasthenia, nightmares.</li> </ul>	D3-D4

<ul style="list-style-type: none"> <li>- Headache;</li> <li>- Ailments concerning neck pain, pain in the scapula, shoulders or back;</li> <li>- Coughing, tracheitis, bronchitis, bronchial asthma;</li> <li>- Pain in the area of heart, feeling of tightness in the chest, pericarditis;</li> <li>- Hiccupping, nausea, vomiting, stomach pains.</li> </ul>	D4-D5
<ul style="list-style-type: none"> <li>- Headache, dizziness, poor memory;</li> <li>- Delay in speech development and decelerated growth in children;</li> <li>- Muscle tension in the back and spine;</li> <li>- Pain in the back and chest, intercostal neuralgia, pain in spine and muscle cramp in the back (cramp);</li> <li>- Coughing, dyspnoea, bronchitis, bronchial asthma;</li> <li>- Heart palpitation, arrhythmia;</li> <li>- Vomiting, poor appetite, anorexia, chronic enteritis;</li> <li>- Neurasthenia, feeling of fear, anxiety, hysteria.</li> </ul>	D5-D6
<ul style="list-style-type: none"> <li>- Tension at the back of the head, back and neck pain, limited spinal mobility, of muscle cramp in the back, intercostal neuralgia;</li> <li>- Inflammatory diseases of upper respiratory tract (acute respiratory diseases), coughing, breathlessness, tracheitis, bronchitis, bronchial asthma, pleurisy;</li> <li>- Heart palpitation, pericarditis, pain in the heart area, pain in the back and heart;</li> <li>- Belching, hiccupping, nausea, dysphagia, borborygmus, spasm of oesophagus, stomach pain, dyspepsia, pancreatitis;</li> <li>- Hypersplenism (enlarged spleen);</li> <li>- Hair loss;</li> <li>- Acute conjunctivitis, corneal ulcer, sty.</li> </ul>	D6-D7
<ul style="list-style-type: none"> <li>- Neurogenic vomiting, increased hyperhidrosis, nettle-rash;</li> <li>- Anaemia, nose, intestinal and uterine bleedings;</li> <li>- Back pain and lumbago, intercostal neuralgia, intervertebral muscle cramp (spasm of muscles along the spine);</li> <li>- Coughing, breathlessness, tracheitis, bronchitis, bronchial asthma, Pleurisy.</li> <li>- Hiccupping, nausea, vomiting, borborygmi, poor appetite, stomach pain, discomfort in the stomach (gastric dyspepsia), cholecystitis;</li> <li>- Diabetes mellitus;</li> <li>- Pain in abdomen, back pain and lumbago, urinary tract infections.</li> </ul>	D7-D8
<ul style="list-style-type: none"> <li>- Back pain and lumbago;</li> <li>- Mucous discharges from the nose, nosebleeds, coughing, pleurisy;</li> <li>- Pain in the chest, hypochondrium and pain in the heart area;</li> <li>- Anorexia, dyspepsia (vomiting, diarrhoea, decreased peristalsis, irregular stool, constipation, wind, borborygmus, spasm of oesophagus and stomach, pain in stomach), chronic gastritis, diseases of stomach and liver;</li> <li>- Poor night vision, conjunctivitis, atrophy of the optic nerve, cataract, retinitis; - Hysteria, psychosis, phobia (fear).</li> </ul>	D9-D10
<ul style="list-style-type: none"> <li>- Stomach pain, waist, back, contracture and disorders of mobility in the spine, intercostal neuralgia;</li> <li>- Painful coughing, pleurisy;</li> <li>- Arterial hypertension;</li> <li>- Reduction or loss of appetite (anorexia), nausea, vomiting, dysphagia, borborygmi, pain and heaviness in stomach, diarrhoea, spasms of oesophagus and stomach spasms, narrowing of oesophagus, pains in stomach, jaundiced skin, gall-bladder and liver dysfunction, cholecystitis, hepatitis;</li> <li>- Diseases of the kidneys;</li> <li>- Poor vision;</li> <li>- Asthenic conditions, phobias (alarm and fear).</li> </ul>	D10-D11
<ul style="list-style-type: none"> <li>- Back pain, weakness of the limbs, anasarca (widespread swellings), nettle-rash;</li> <li>- Dyspepsia, belching, wind, poor appetite and exhaustion, vomiting blood, diarrhoea, jaundice, stomach pain, stomach ulcer, duodenal ulcer, pain in the intestine, enterocolitis, haemorrhoids, rectal prolapse in children, intestinal bleeding, jaundice;</li> <li>- Psychosis, epilepsy, seizures in children;</li> </ul>	D11-D12
<ul style="list-style-type: none"> <li>- Abdominal pain, back and spine;</li> <li>- Abdominal pain and borborygmi, constipation, wind, pain in epigastric area, vomiting, vomiting in babies, exhaustion (hypotrophy and lag of physical development);</li> <li>- Gastritis, stomach ulcer, enterocolitis, functional disturbances of liver, hepatitis, pancreatitis, enlarged liver (hepatomegaly);</li> <li>- Enlarged spleen (splenomegaly).</li> </ul>	D12-L1

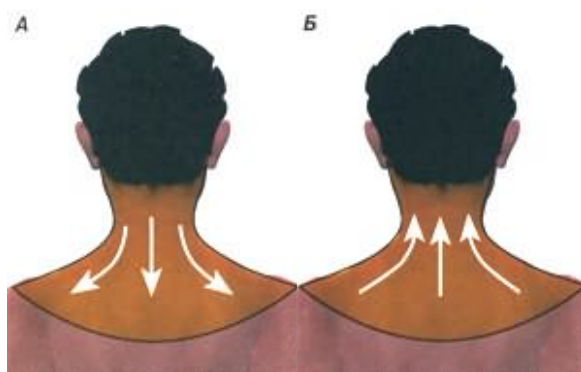
<ul style="list-style-type: none"> <li>- Pain and contracture of the lower back, muscle tension around the spine and small of the back, swelling of lower limbs;</li> <li>- Dysphagia, spasmodic pain and spasms in the stomach, dyspepsia, borborygmus, abdominal distension, diarrhoea, diseases of small intestine (enteritis), diseases of large intestine (colitis), dysentery, hepatosplenomegaly (enlarged liver and spleen);</li> <li>- Nocturnal enuresis, incontinence (atony of urinary bladder, weakness of sphincter of the urinary bladder), nephritis;</li> <li>- Lactation dysfunction, mastitis, endometritis, parametritis;</li> <li>- Disturbance of sexual function in men;</li> <li>- Neurasthenia.</li> </ul>	L1-L2
<ul style="list-style-type: none"> <li>- Headache, dizziness, ringing in ears;</li> <li>- Pain and tension in back and waist, feeling of tension in spine muscles, pain in thigh, paralysis of lower extremities, lumbago;</li> <li>- Diseases with tendency to bleedings, nosebleeds;</li> <li>- Vomiting, diarrhoea, melena, stool with blood, gastralgia, intestinal colic (pain in intestine), intestinal diseases (of small and large intestine), haemorrhoids;</li> <li>- Urinal incontinence, prolonged urination, nocturnal enuresis, haematuria (blood in urine), anuria, nephritis;</li> <li>- Anasarca (widespread swellings);</li> <li>- Diabetes mellitus;</li> <li>- Glaucoma;</li> <li>- Endometritis, adnexitis, disorders of menstrual function and other gynaecological diseases;</li> <li>- Diseases of male genitalia;</li> <li>- Sleep disorders, weakness.</li> </ul>	L2-L3
<ul style="list-style-type: none"> <li>- Anorexia, weakness;</li> <li>- Pain in lower back;</li> <li>- Inflammation of the navel area in children;</li> <li>- Enterocolitis, rectal prolapse, haemorrhoids;</li> <li>- Diseases of pelvic organs, cystitis.</li> </ul>	L3-L4
<ul style="list-style-type: none"> <li>- Hypertension;</li> <li>- Pain in lower back and in pelvic area, pain in the external surface of knee joint, paralysis and disturbances of sensitivity of lower extremities, lumbago;</li> <li>- Diarrhoea, intestinal colic, borborygmi, abdominal distension, constipation, rectal prolapse, enterocolitis, enteritis, colitis, haemorrhoid;</li> <li>- Urinary incontinence, cystitis, nephritis;</li> <li>- Disturbance of the menstrual cycle and other gynaecological diseases;</li> <li>- Diseases of male genitalia.</li> </ul>	L4-L5
<ul style="list-style-type: none"> <li>- Arterial hypertension;</li> <li>- Paralysis of lower extremities, lower back pain;</li> <li>- Urinary incontinence of urine, delay in urination, anuria, haematuria, cystitis, nephritis;</li> <li>- Borborygmus, diarrhoea, constipation, enteritis, colitis, rectal prolapse, haemorrhoid.</li> </ul>	L5-S1
<ul style="list-style-type: none"> <li>- Abdominal pain, sacrum and hip joint pain, lumbago;</li> <li>- Intestinal colic, diarrhoea, constipation, enterocolitis;</li> <li>- Gynaecological diseases.</li> </ul>	S1-S2
<ul style="list-style-type: none"> <li>- Pain in the sacrum, waist, spine, feeling of weakness in knee joint, pain in joints;</li> <li>- Wind, constipation, diarrhoea, enterocolitis;</li> <li>- Disturbance of urination, incontinence of urine, heavy urination, cystitis, anuria, pyelonephritis;</li> <li>- Diabetes insipidus;</li> <li>- Labour pains, endometritis, swelling of genitals, disturbance of menstrual cycle;</li> <li>- Diseases of male genitalia.</li> </ul>	S2-S3
<ul style="list-style-type: none"> <li>- Pain in the area of small of the back, sciatica, pain in spinal column;</li> <li>- Intestinal colic, diarrhoea, enteritis, enterocolitis, haemorrhoids, dysentery;</li> <li>- Cystitis;</li> <li>- Disturbance of menstrual cycle.</li> </ul>	S3-S4
<ul style="list-style-type: none"> <li>- Pain in the area of the back and small of the back, sacrococcygeal pains, pain in buttocks, in waist, muscles tension of spine, paralysis of legs;</li> <li>- Anaemia;</li> <li>- Constipation, anal dysfunction, faecal incontinence, rectal prolapse, haemorrhoids;</li> <li>- Urinary dysfunction, cystalgia, cystitis, pain in urethra, insufficient kidney function;</li> <li>- Disturbance of menstrual cycle, endometritis;</li> <li>- Diseases of male genitalia.</li> </ul>	S4-S5

In case of complaints the segmental zone is treated using the [THERAPY](#) program at the frequency of 60 or 77 Hz in the [ER-2](#) range, from the osseous processes of the vertebrae to the lateral areas of the body on both sides. The width of the area treated by the device must correspond to the width of the patient's hand. Move or relocate the electrodes at the speed of 1 -3 cm per second. Stop when the complaint subsides or disappears altogether. When there are no longer any complaints, segmental zones of particular applications must be treated using the [TEST](#) or [SCREENING](#) programs at the [ER-2](#) range. The latent [Trigger zones](#) must be treated using the [THERAPY](#) program.

### Segmental zones for general treatment


Aside from the above segmental zones, in operating DENS, general treatment zones are used efficiently. They consist of the cervical-collar zone ([CCZ](#)) and lumbar-sacral zone ([LSZ](#)). The [CCZ](#) will be treated if the pathologic process is localised in the head, neck and upper extremities; the [CSZ](#) - in pathologic processes of the abdominal cavity organs, those of retroperitoneal space, pelvis minor, and in lower extremities.

**Cervical-collar zone (CCZ).** The upper limit of this zone passes along the outer surface of the neck at the level of spinous process of the second cervical vertebra. The lower limit is an imagined horizontal line drawn at the level of the scapulae. The lateral limits lie in the lateral surfaces of the neck, shoulders, and upper arms on both sides.



The device treatment of this zone is performed using the [TEST](#) or [SCREENING](#) programs in the [stable](#) mode at [ER-1](#) or [ER-2](#), with revealing the [Trigger zones](#).

Apart from segmental responses, treatment of this zone will result in a general adaptive response, in the form of normalization of the vegetative nervous system functional condition on a widespread basis. This makes it possible to use treatment of the cervical-collar zone in diseases of the brain vessels, chronic inflammatory conditions in the head and neck areas, in neuroses, in changes of arterial blood pressure of various aetiologies, and in other diseases.



**IMPORTANT!**

**When treating the cervical-collar zone one should take the following into consideration:**

- in diseases whose symptoms include increased intracranial and arterial pressure (blood pressure - BP), the direction of the device movement along the zone in the [THERAPY](#) program must always be top-down;
- in diseases whose symptoms include decreased BP and in conditions of shock, the direction of the device movement along the zone in the [THERAPY](#) program must always be bottom-to-top;
- the [ER-3](#) action will always increase BP in patients;
- in stable normal BP, the direction of the device movement along the CCZ must always be horizontal;
- in unstable BP, prior to use of the device over the CCZ, it is advisable, first of all, to measure the BP and to continue working according to concrete values.

**"Cervical circle" Zone (CC).** The device treatment will be performed in the [TEST](#) or [SCREENING](#) programs at the minimal or comfortable energy level, starting from posterior central line of the neck and then moving the device along the neck circumference, bypassing the zone of the lower third of the neck in the front (the frontal projection of the thyroid gland) and closing the circle on the back of the neck.



In the zone of "cervical circle", large nervous branches and nodes of the vegetative nervous system, large blood vessels and lymphatic nodes are localised. The "cervical circle" is included in the DENS prescription when dealing with any problems associated with diseases of the head (pathologic changes in the brain, hearing organs, poor vision, diseases of throat and nose, etc.) and neck (laryngitis, pharyngitis, tracheitis, etc.).

**The lumbar-sacral zone (LSZ)** is situated on the body's back surface. The zone's upper limit is the twelfth rib, and the lower limit is where sacrum meets the coccyx. From the sides, it is restricted by the lateral surfaces of the body on both sides.

Treatment upon this zone is performed using the [TEST](#) or [SCREENING](#) programs at the [ER-2](#) range, with exposure of the [Trigger zones](#).

In this zone, DENS treatment has an effect upon blood supply and trophism of the small pelvis and the lower limbs. Treatment of the lumbar-sacral zone is given in instances of diseases of the lower limbs, intestine, in enuresis, functional disorders of the male sexual sphere, functional and inflammatory diseases of female sex organs, in secondary infertility, in the rehabilitation period after diseases and injuries of the spinal cord, and in some other diseases.

Apart from particular segmental responses, treatment of the lumbar-sacral zone induces complex general responses manifested by a aponic effect upon the whole organism, improvement of sleep, appetite, raising of the general tonicity.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

# CHAPTER 4

## DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS

### 3. UNIVERSAL (GENERAL) ZONES

Universal zones comprise those areas where visible large nervous structures are situated (the spinal cord, vegetative ganglia, trigeminal nerve) or areas rich in microcirculatory passages. The universal zones include the posterior meridian zone (skin zone which corresponds with the body's posterior median line) and the "[concordance points](#)" zone (the paired paravertebral zone as well as the trigeminal zone and the hands and feet zone). These zones are included in the [TEST](#), [SCREENING](#) and [THERAPY](#) treatment programs in situations where it is necessary to stabilize the therapeutic effect and reduce or eliminate the causes of the disease (pathogenetic treatment) and obtain a clear general adaptive response from the organism.

In the universal zones DENS will be preferable also in those cases where it is unnecessary to localisedize the reflex effect precisely but where, on the other hand, it is essential to provide a reliable long-lasting general (systemic) response, to eliminate exhaustion, to raise the capacity for work, to influence the central nervous system functions in order to normalize treatment of the endocrine system and the balance between the processes of excitation and inhibition.

**Posterior zone of the meridian midpoint or the posterior midpoint line of the body.** In this zone, the BAP ( biologically active points) of the posterior meridian midpoint is localised. It covers the spinous processes of vertebrae from the top to the second cervical vertebra to the last sacral vertebra. The spinous processes of vertebrae are located on the back and can easily be felt in almost all people.



The treatment is performed using the [TEST](#) or [SCREENING](#) programs at minimal or comfortable energy level ([ER-1](#) or [ER-2](#)) in order to reveal latent [Trigger zones](#). The [stable](#) treatment mode is applied.

**The "concordance points" zone or paravertebral zone •.** The paired skin zone (right and left). It is situated paravertebrally, i.e. next to the spine and parallel to the Posterior zone of the meridian midpoint. In projection of this zone, sympathetic ganglia of the vegetative nervous system are situated. Besides, it is a zone of frontal projection of the spinal cord root exits.



When treating the "concordance points" zone using the [TEST](#) or [SCREENING](#) programs, the device electrodes are established in the order indicated with numbers in the Figure. The [LT](#) zones (section 4 of Chapter 4) are shown when comparing parameters in symmetrical areas. The treatment energy level will either be minimal or comfortable.

**The trigeminal zone** is a zone of frontal projection of the passage of the upper, middle and lower branches of the trigeminal nerve on the right and left sides.



The points of the trigeminal nerve branch passages are located on the face:

- the first pair of points (the upper branch) are in the eyebrow area, near bridge of nose;
- the second pair of the points (the middle branch) are ectad from the nasal wings;
- the third pair of the points (the lower branch) are a little below the corners of the mouth.

Treatment in this zone is performed in the following way: the first pair of points followed by the second and the third ones will be treated using [TEST](#) or [SCREENING](#) programs. The results obtained at symmetrical areas should be compared in order to reveal the [LTZ](#) (see below, section 4 of this Section).

**The hands and feet zone.** The organism's responses to stimulation of the hand and foot skin are general responses owing to presence in these zones of rich neural-receptor apparatus and a microcirculatory bed. Additionally, the [Su Jok](#) therapy concordance system of all internal organs and related parts of the body are situated in the hands and feet.

During the procedure, the hands and feet are treated in pairs using the "[TEST](#)," "[SCREENING](#)," or [THERAPY](#) programs with the search for latent [Trigger zones](#) (see below, section 4 of this Section)



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 4 DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS

### 4. TRIGGER ZONES

Trigger zones (TZs) are specific abnormal zones at certain areas and zones of the human body. As a rule, healthy people should not have Trigger zones. This is a phenomenon brought about by specific neural-reflex connections of the skin, sinews and muscles with internal organs and organ systems.

Disorders in the functioning and the structure of internal organs, in certain limited skin areas, in sinews, muscles, periosteum, lead to an occurrence of colour disturbances, sensitivity, enhanced painfulness, areas of induration, changes in electric conductivity and other changes not characteristic of a healthy body and not found in other symmetrically positioned parts of the body. These have been referred to as "trigger" zones.

The Trigger zones can be active (visible) and latent (hidden).

#### **Active TZs**

Active TZs can be revealed by the operator by means of questioning the patient, through examination of the latter, and with palpation (with the fingers) and percussion on the body surface.

The active TZs comprise:

- localised projections of complaint (e.g. pain in certain parts of the body or the extremities);
- localised painfulness occurring after palpitation with fingers or following movement;
- localised disruption of skin sensitivity, sweating, temperature;
- reddening or paling of separate skin areas;
- localised induration in the skin, focal painful swellings, "goose flesh" on a restricted skin area, spots of abnormal pigmentation or flaking, etc.;
- localised change in the muscle tonus, induration of muscle tissue in various places, of various shape and extension (varies from a few millimetres to a few centimetres).

The active TZs in patients with internal organ diseases are often manifest in localised areas with enhanced sensitivity and/or reflected painfulness in respective areas (segments) of the body (the Zakharyin-Ged zones).

#### **Latent TZs**

The appearance of latent TZs is associated with localised changes in electric skin impedance and with a localised vegetative response that will occur in segmental or general zones, or in the zone of frontal projection of the organ in case of its function disorder.

The main differences between latent and active TZs can be seen in the following:

- Latent TZs appear on the human body in the preclinical stage of any acute disease or as an exacerbation of a chronic pathologic process, i.e. prior to the appearance of complaints and active TZs in the patient.
- Latent TZs are not revealed by ordinary techniques of examination (in physical examination, palpation, percussion, listening, etc.).
- Latent TZs can only be revealed using DENS.

Latent TZs can be revealed both in the [TEST](#) and the [THERAPY](#) programs.

In the [TEST](#) program, the following indications of latent TZs will be in evidence:

1. Sensitive asymmetry- localised change of the skin sensitivity during DiaDENS Device treatment in any program, but at the same ER (in this area, in comparison to others, the patient feels either an enhanced or a weakened piercing sensation).
2. Localised change in skin colour. Following treatment of a skin area under the device electrode (contact asymmetry) or in another body area (distant asymmetry), reddening or paling appears, distinguishing this particular area from others.
3. Temporary asymmetry. Zones where the treatment time of the device in the [TEST](#) program up until the signal sounding is considerably different from that of the treatment in other areas, either greater or less, or zones where the treatment time is over one minute.
4. Change in ALT index in the [SCREENING](#) program on adjacent or symmetrical sections of the skin, either increase or decrease.
5. Localised increase in perspiration. Following treatment of a skin area, drops of perspiration appear under the device electrode thus distinguishing this particular area from others.
6. Change in the operational sound of the device in a localised skin area during treatment in using the [THERAPY](#) program in the [labile](#) mode.
7. When moving the device in the [THERAPY](#) program, the operator has to make an effort when moving the electrodes in a separate skin area (the "sticking effect").

The active and the visible latent TZs are subject to mandatory treatment in the [THERAPY](#) program at [ER-2](#) during 3-5 minutes.



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

# CHAPTER 4 DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS

## 5. VARIOUS SPECIAL ZONES

### **Second cervical vertebra zone (2CV)**

2CV is positioned on the border between the head and the neck (along the lower hairline). It is treated in diseases and injuries of the head and neck involving increased intracranial pressure; as well as dizziness, headaches, neuralgia of the occipital nerve, etc.



Treatment is performed in the [stable](#) or [labile](#) mode in the [THERAPY](#) program at frequency 60, 77 or 10 Hz at the [ER-2](#) range for 2-3 minutes. In painful disorders, the treatment will be continued until there is an improvement in the patient's general wellbeing or until pain has been fully eliminated.

### **Seventh cervical vertebra zone (7CV)**

**7CV** - the last cervical vertebra, its spinous process, which can always be felt in palpation along the middle posterior line in the lower part of the neck.



Treatment is performed in cases of allergic, autoimmune or any inflammatory processes and diseases.

Treatment is performed out in the [stable](#) mode in the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-2](#) range for 3-5 minutes.

### ***Jugular fosse zone***

is positioned on the edge of the border between the neck and the sternum.

Treatment of the jugular fosse is performed in cases of any allergic diseases, suffocation, coughing, disorders of swallowing.



DENS is performed in the [stable](#) mode in the [THERAPY](#) program at frequency of 60 or 77 Hz at the minimal or comfortable energy level for 3-5 minutes.

### ***Tongue zone***

is positioned on the middle third of the tongue.

Owing to abundant blood supply and specific nervous connections, treatment for the tongue zone can be used in cases of mouth cavity diseases (mucous membrane, teeth, tongue, sore throat), speech disorders, pharyngitis and laryngitis, constipation, etc.



One should remember that the action upon the tongue zone exerts a stimulating effect on the central nervous system, therefore it is recommended that it is not carried out in the evening and prior to patient going to sleep. The tongue zone may be treated in patients of any age.

The tongue zone is treated using the [THERAPY](#) program at frequency of 60 or 70 Hz at the minimal energy level for 2-3 minutes.

### ***Speech zones***

are positioned in a cross formation around the area of the mouth: the upper lip, the lower lip, the left and right corners of the mouth.

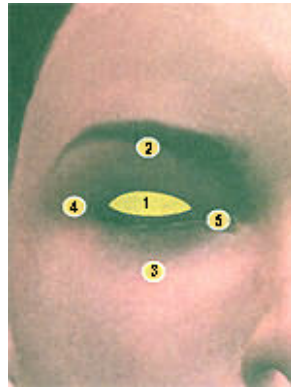


This zone is subject to treatment for any speech disorders (motor aphasia resulting from a stroke, stuttering, etc.).

The speech zones are treated using the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-1](#) range for 2-3 minutes in each position.

### ***Eye area and the paraorbital zones***

The eyes are treated through closed eyelids via points situated at the upper and lower margins of the orbit, in medial and lateral corners of the eye.



***Zone of frontal projection of the carotid arteries***

is positioned in the middle third of the neck, in front and medially of the right and left muscles used for nodding.



It is used in diseases of cardiovascular system, hypertensive crises, high fever.

Treatment is performed in the [stable](#) mode using the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-1](#) range for 1 -2 minutes on each side.

***Zone of frontal projection of the adrenal glands***

is positioned in the lower segments of the chest, behind it, on the right and left sides of the spine.



It is widely used in dishormonal disturbances, chronic inflammatory diseases, allergic processes, and in emergency conditions.

Treatment is performed in the [stable](#) or [labile](#) mode using the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-2](#) range. Duration of the treatment is 3-5 minutes on each side.

***Kidney, ureter, and bladder zone***

Frontal projection of the kidneys is found in the lumbar area on both sides; frontal projection of the bladder is found in the suprapubic area.

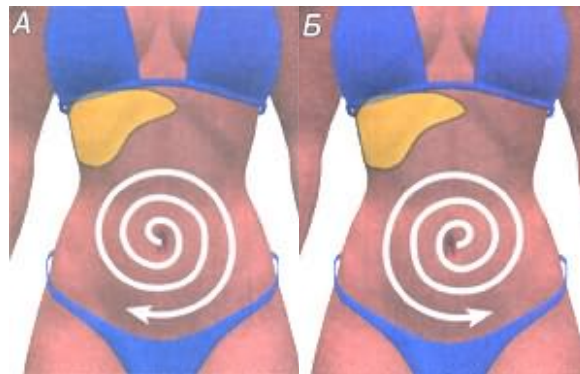


DENS is used in any diseases accompanied by oedemas, in all kinds of increased pressure (arterial, intracranial, intraorbital, in the portal vein, etc.).

Treatment is performed using the [THERAPY](#) program at frequency of 60 or 77 Hz at either the [ER-1](#) or [ER-2](#) range. The device is moved by sliding from the lumbar area from the lateral surface of abdomen forwards and downwards to the suprapubic area. The treatment is performed for 5-7 minutes on each side. Where LTZ occurs (the "sticking effect"), the latter is treated for a further 3-5 minutes in each zone.

### **Liver and intestinal zone**

Frontal projection of the liver is found in the right lower segments in the front surface of the chest, as well as laterally and behind, its width being equal to patient's palm width; the intestine zone is positioned on the anterior surface of the abdomen.



The lever and intestine areas are treated in almost all chronic diseases, in all types of metabolic disorders, and in acute and chronic intoxications, within the course treatment.

DENS is performed using the [THERAPY](#) program in the [stable](#) or [labile](#) mode at frequency of 60 or 77 Hz at the [ER-2](#) range. First the liver area is treated, taking into account any incidence or absence of gall stones (if stones are present, the liver is only treated laterally or from behind, whereas if stones are not present, treatment is from all three sides) for 5-7 minutes. Then the intestine is treated in the [stable](#) or [labile](#) mode using the [THERAPY](#) program at either the [ER-1](#) or [ER-2](#) range, depending on the character of the stool (in cases of normal stools and those tending towards constipation, the device should be moved clockwise, whereas in the instance of weak stools it should be moved anticlockwise) for 10-15 minutes. Diagnosed [Trigger zones](#) are treated additionally for 3-5 minutes each.

### **Suprapubic zone**

is a triangular area whose apex is positioned in the umbilicus and the base is in the inguinal folds and pubic area. In women, a frontal projection of the uterus and ovaries is positioned within this zone.



Stimulation of the suprapubic zone is used in instances of menstrual cycle disorders, dishormonal disturbances, in circulation disorders and pathologic processes in the pelvis minor in women, as well as for normalising the functionality of sexual organs in women and in men. Treatment of the suprapubic zone is indicated as a general normalising action in almost all instances of chronic diseases in women.

In the instance of complaints, the suprapubic area is treated in the [stable](#) or [labile](#) mode using the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-2](#) range. In this case, treatment is exerted until there is a substantial improvement in health or until pain has been eliminated.

In the absence of pain and in course of treatment, the suprapubic area is treated using the [TEST](#) or [SCREENING](#) program, with diagnosed LTZs and with their subsequent treatment being carried out using the [THERAPY](#) program at frequency of 60 or 77 Hz for 3-5 minutes.

#### **Perineum zone**

is situated between the anus and scrotum in men and between the anus and vulvar lips in women.

Treatment is used in any inflammatory diseases of sexual organs in men and women alike, in disorders of sexual function in men, as well as in diseases of the rectum.

Treatment is performed in the [stable](#) mode using the [THERAPY](#) program at either the [ER-1](#) or [ER-2](#) ranges at frequency of 60 or 77 Hz for 3-10 minutes.

#### **He-gu zone**

is situated on the back of the left and right hands in the standard triangle between the first and second middle metacarpal bones. This zone contains the point of the classical meridian of the colon 4GI (he-gu), being one of the main medical strengthening and prophylactic points.



It is used in allergic diseases, in pathologic processes in the nervous system, for improving the circulation in the brain in numerous diseases and conditions. Stimulation of this zone is effective in epilepsy, amenorrhea, prolonged labour, constipation.

Treatment is performed in the [stable](#) mode using the [THERAPY](#) program at frequency of 60 or 77 Hz at [ER-2](#) for 3-5 minutes on each side.

#### **Zu-san-leizone**

is situated on both legs, below the exterior of the patella. It is one of the most frequently used points. Stimulation of the point zu-san-lei enhances treatment of other points and zones.



Treatment is performed in diseases of the nervous and cardiovascular systems, in diseases of the gastrointestinal tract, and in diseases of mammary glands.

Stimulation of the zu-san-lei points is also effective in reducing pain of any origin, fever, insomnia, high BP. Treatment is performed in the same way as with the he-gu points: in the [stable](#) mode using the [THERAPY](#) program at frequency of 60 or

77 Hz at the [ER-2](#) range for 3-5 minutes on each side.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

# CHAPTER 4

## DEVICE TREATMENT

## ZONES AND DATA

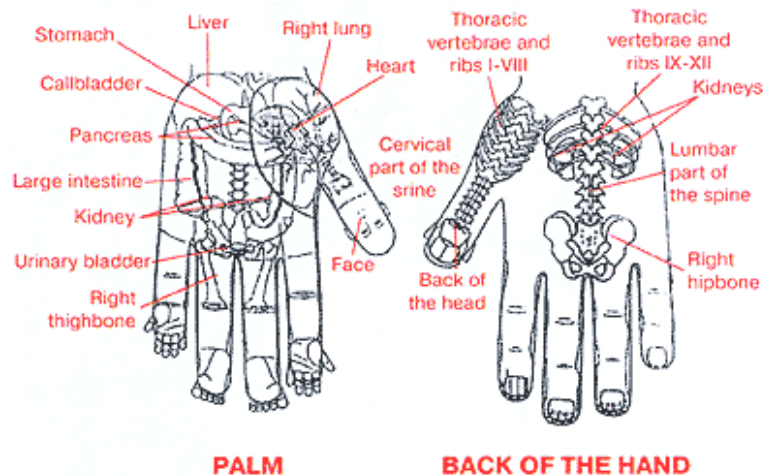
## PROCESSING METHODS

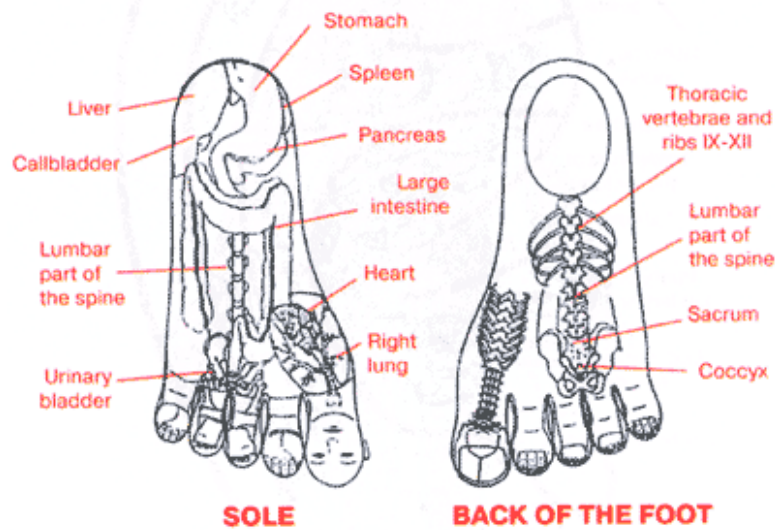
### 6.CONCORDANCE SYSTEM ZONES AND POINTS

In order to increase the efficacy and extent of the therapeutic capacities of DENS treatment, the individual prescription might include action upon the zones and points of the organ and system representations according to diagnosis, some of which have long since been known, and others are quite modern developments. At present, among the known concordance systems, the maxi-sys-tems can be distinguished (e.g. on the body, face, head), midi-systems (e.g. on the feet, hands, sexual organs), and mini-acupuncture systems (e.g. auricular, orbicular, nasal, oral).

#### *Su Jok concordance system in the hands and feet*

Where complaints are in evidence, the points and zones of the Su Jok concordance system should be treated using the [THERAPY](#) program at 20, 60 or 77 Hz at the [ER-2](#) range for 3-5 minutes. Treatment of the hands and feet zones can be combined and alternated until the desired effect is achieved. In elderly persons, children and obese patients, treatment of the Su Jok concordance systems yields even better effects than treatment of a complaint in frontal projection.





As a course treatment for chronic diseases (when exacerbation of the condition has already been halted), the Su Jok zones should be treated in combination with the following programs: first any of the two sides with the [THERAPY](#) program at the [ER-2](#) range for 2-3 minutes, then the other side using the [TEST](#) program.

### ***Auricular Concordance System.***

Stimulation of the auricular (ear) concordance system is done by an external (pointed) [THERAPY](#) electrode using the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-1](#) or [ER-2](#) range. The duration of application and the set of points to be treated depends on the situation. At the acute stage of the disease, especially if pain is present, the points can be combined for treatment until the condition improves (no more than 5 minutes per point). During the course of treatment when no acute complaints are present, the points are treated for 2-3 minutes each, 3 to 4 points per procedure.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 4 DEVICE TREATMENT ZONES AND DATA PROCESSING METHODS

### 7. THE MAIN ZONES OF RESUSCITATIVE THERAPY

The main zones of the resuscitative therapy are situated on the face which makes them readily accessible.

*The first zone* is positioned on the upper lip. The inbuilt electrode is placed tightly against the upper lip from the outside in such a way that part of the electrode touches the place of transition from the nasal septum to the upper lip.

*The second zone* is positioned in the centre of the chin-lip sul-cus.

*The third zone* is positioned in the middle of the tip of the nose.

*The above zones* are treated in the event of shock, fainting induced by any cause, loss of consciousness, obvious alcohol intoxication.



In case of emergency, treatment is performed in the [stable](#) mode using the [THERAPY](#) program at frequency of 77 Hz at the maximum energy capacity. For each resuscitation zone, treatment is performed in phases lasting 30 seconds until the desired effect is achieved or until the arrival of an emergency medical team.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 5 RECOMMENDED TREATMENT PROCEDURES AND DIADENS DEVICE TECHNIQUE

### SCHEME 2. COMPLAINT IS COMPLEX AND LOCALISED, DISEASE IS CHRONIC

This is the most common variant of this course of diseases. In these cases, patients usually have numerous consultations, examinations, and are taking an assortment of medicines. In this case, DENS becomes a significant additional form of treatment, often enabling a reduction in the patient's medicine intake, reducing the frequency and severity of exacerbations. If complaints arise during an acute condition, it is recommended that treatment is carried out according to SCHEME 1.

When symptoms of an acute condition are lessened or eliminated, it is advisable to perform course treatment for more pronounced results. The duration of course treatment is determined on an individual basis, being subject to the disease itself, its severity, concomitant pathology, and includes 5-7 to 12-15 procedures and sometimes more (see disease prescription, Chapter 4).

The following zones are recommended for treatment during the procedure:

- one of the common universal zones (the [posterior zone of the meridian midpoint](#), the "[concordance points](#)" zone, the trigeminal area or trifacial zone, the area of hands and feet) using the [TEST](#) or [SCREENING](#) program with further treatment of [LTZs](#) treated using the [THERAPY](#) program at frequency of 60 or 77 Hz at the [ER-2](#) range for 3-5 minutes on each;
- segmental zones of particular or universal treatment using the [TEST](#) or [SCREENING](#) program with further treatment of [LTZ](#) performed using the [THERAPY](#) program at 60 or 77 Hz at the [ER-2](#) range for 3-5 minutes for each;
- special zones:
- liver and in [TEST](#) line zones will be treated in the [labile](#) or [stable](#) mode in the [THERAPY](#) program at 60 or 77 Hz at the [ER-2](#) range (refer to Chapter 2);
- suprapubic area in the [TEST](#), [SCREENING](#) or [THERAPY](#) program in a [labile](#) or [stable](#) mode at frequency of 77 Hz at the [ER-2](#) range (refer to the same chapter);
- zone 7 of CV, jugular fosse, adrenal glands, he-gu, zu-san-lei in combined modes;
- zones of concordance systems in keeping with the [Su Jok](#) method in combined modes, as in chapter 4;

During one procedure combine do not more than 2-3 zones.

Average procedure duration: for babies up to 12 months - 5-10 minutes; for children of 1 -3 years - 10-15 minutes; for children of 4-5 years - 15-20 minutes, for children over 5 years old and for adults - 20-40 minutes.

As a rule, the procedure is performed once daily. In cases of prolonged, persistent and severe diseases (for example, cerebral strokes skin diseases etc.), the procedure may be performed 2-3 times a day. It is recommended that the courses are repeated after an interval of 2 weeks.

If during the intervening period new complaints appear or former complaints recommence, DENS must be restarted earlier, as required.

**Clinical example.** A patient with a history of frequently catching colds develops clinical symptoms of rhinitis (stuffiness of the nose, mucopurulent nasal discharges, feeling unwell, fever) after becoming excessively cold. This is an exacerbation of

a chronic disease. In this case, as in SCHEME 1, DENS ought be started with the [FPC](#) (frontal projection of nasal and submandibular area) using the [THERAPY](#) program at 60 or 77 Hz at the [ER-2](#) range in either of the [stable](#) or [labile](#) modes. One can treat concordance zones in keeping with the [Su Jok](#) method on the thumbs and toes using the [THERAPY](#) program at frequency of 20, 60 or 77 Hz at the [ER-2](#) range for 3-5 minutes at each zone and/or AT 14, AT 13, AT 55, AT 71 or AT 95. The said zones may be combined, their treatment repeated until the condition improves (restored nasal breathing). When treating such a patient, it is advisable to apply treatment to one or two auxiliary zones during each procedure (projection 7 of CV, adrenal glands, jugular fosse, points he-gu and zu-san-lei). When complaints recommence, the treatment procedures should be repeated (up to 5-7 times daily as required). As the symptoms of the acute condition are eliminated, one should include treatment of the common zones, projection of liver and in [TEST](#)ine, the suprapubic area in the DENS prescription, along with the above zones. During one treatment procedure, do not combine more than 2-3 zones. The duration of the treatment course is 7-10 days.



[Content](#) :: [Chapters](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) :: [Contacts](#)

## CHAPTER 5 RECOMMENDED TREATMENT PROCEDURES AND DIADENS DEVICE TECHNIQUE

### SCHEME 3. PRESENCE OF A NUMBER OF DIFFERENT COMPLAINTS

Patients with several different chronic diseases may present a number of different complaints simultaneously. The operator must choose a priority complaint in order to commence treatment. The choice of complaint should be made by the following principles:

First and foremost life-threatening situations (for example, if a patient is affected by an attack of bronchial asthma and simultaneously has pain in the knee, it is necessary to commence treatment to eliminate the asthmatic fit, since this condition is life-threatening).

- First-time complaints take priority (for example, the patient has had knee pain for 20 years, and now pain is present in the hip joint. In this case, treatment must be commenced with the hip joint).

- If it is impossible to determine priorities as above, treatment should be commenced on the complaint which disturbs patient the most (for example, the patient has had chronic constipation and a disease of the joints for approximately the same amount of time). Variant 1: at the current time, stool delay stretches for several days. Treatment for such a patient must be commenced with the Liver and in [TEST](#) line. Variant 2: Patient produced a stool the previous evening. DENS must be commenced with treatment of the affected joints.

After the zones for treatment have been determined, please follow SCHEME 2.



[Content](#) :: [Chapters 1 2 3 4 5 6 7](#) :: [Contacts](#)

# CHAPTER 5 RECOMMENDED TREATMENT PROCEDURES AND DIADENS DEVICE TECHNIQUE

## SCHEME 4. INDEFINITE COMPLAINTS

Complaints are provisionally indefinite if the patient cannot describe his or her feelings clearly, and defines them as indisposition, weakness, easyfatigability (in medicine this is known as asthenia), emotional instability and so on. Such conditions may be clinical manifestations of a number of diseases, especially at initial stage (the "pre-disease" condition).

The purpose of DENS is to eliminate these symptoms as far as possible and in some cases to determine and eliminate the cause of the initial pathosis by searching for latent [Trigger zones](#) and a way of treating them.

To decrease clinical symptoms of the asthenic syndrome, [MED](#) program can be applied in any of the selected points (he-gu point, tsyu-san-li point, in 7 SP projection or any other point).

In order to reveal the source of indefinite complaints and to diminish the clinical manifestation of asthenia one should:

- treat one of the general universal zones ([posterior zone of the meridian midpoint](#), the "[concordance points](#)" zone, [trigeminal zone](#), or hands and feet zone) in the [TEST](#) or [SCREENING](#) program with further treatment of revealed [LTZs](#) in the [THERAPY](#) program at the [ER-2](#) range, at 60 or 77 Hz, spending 3-5 minutes on each;
- or expose one of segmental zones to universal treatment ([CCZ](#) or [LSZ](#)) in the [TEST](#) or [SCREENING](#) program with further treatment for revealed [LTZs](#) on the [THERAPY](#) program at the [ER-2](#) range at frequency of 60 or 77 Hz, spending 3-5 minutes for each zone;
- or treat one of special zones (area of liver and intestine will be treated in a [labile](#) or [stable](#) program using the [THERAPY](#) program at 60 or 77 Hz at the [ER-2](#) range (refer to Chapter 2));
- the suprapubic area may be treated using the [TEST](#), [SCREENING](#) programs or the [THERAPY](#) program in a [labile](#) or [stable](#) mode at frequency of 60 or 77 Hz at the [ER-2](#) range (refer to the same ch.);

No more than 2-3 zones should be combined during the procedure. The average duration of procedure is as follows: in babies up to 12 months - 5-10 minutes; in children of 1-3 years - 10-15 minutes; in children of 4-5 years - 15-20 minutes, in children over 5 years and in adults - 20-40 minutes.

If during DENS treatment certain complaints appear which constitute a satisfactory prognostic sign, SCHEME 1 or SCHEME 2 should be applied until the condition generally improves.

The procedure must be performed as a daily course for 7-10 days. The course may be repeated if necessary.

## MED PROGRAM

The MED (minimum effective dose) program is the microcomputer program applied for prophylactics in anticipation of heavy physical or intellectual strain, following physical or intellectual strain, in cases of chronic fatigue syndrome, lack of wakefulness in the morning, sleepiness during the day, lack of attention and concentration, and for prevention of colds during epidemics. MED allows the body to improve its adaptability. During the administration of the treatment protocol, the MED program is applied once per treatment session.

The MED program works at a frequency of 10 Hz and consists of TEST program treatment on the selected point, after which the device is automatically switched to the THERAPY program and continues stimulating the point at a frequency of 10 Hz for another 5 minutes in the stationary mode.

To enter the MED program, carry out the following steps:

Switch on the device.

Set the frequency to 10 Hz by pressing the FREQUENCY - button until the value F 10 appears.

Place the in-built electrodes onto the skin (e.g. the he-gu zone (see fig. 23 in Part 1 of the Manual) ju-san-li (see fig. 24 in Part 1 of the Manual), or any other zone.)

Set the frequency as shown above (see Chapter 1, Section 2).



**NOTE! Do not move the electrodes on the skin while operating in the MED program!**

After the power capacity has been reached, the WAITING message will change to the 1st phase of the MED program, TEST. Having stabilised the skin impedance of the skin under the electrode, the device emits an audio signal, and the time of the treatment on the point will appear for several seconds in the top line of the screen. The next stage of the MED process consists of an on-going stimulation of the point for a period of 5 minutes (the screen will display the THERAPY message and show the treatment time on the point). After 5 minutes the device will emit the audio signal and the MED program will stop.

**BIOREPER** program - new method of electropuncture auriculodiagnostics (diagnostics relating to the auricle) to assess the functional state of all internal organs and systems, unique to DiaDENS-DT devices. **See details in section 4 of Chapter 2.**

**FOLL program** - method of electropuncture assessment of the state of energy meridians and internal organs and systems in the human body. Can be used for testing and selection of homeopathic and allopathic remedies and food supplements, unique to DiaDENS-DT devices. **See details in point 3 of Chapter 2.**

# PURPOSE AND APPLICATION OF TEST PROGRAM

The TEST program is designed to assess the functional condition of organs and the bodily system by means of searching for zones where the skin impedance will be very different from that in adjacent areas (latent Trigger zones), as well as for treating the skin areas symmetrical to the complaint projection.

The energy range of the treatment is either minimum (ER-1) or comfortable (ER-2). The treatment method is stationary; the electrodes are moved after an audio signal. The TEST program operates at the frequency 10 Hz.

To enter the TEST program, switch on the device and set the frequency to 10 Hz (pressing the FREQUENCY+ button until F10 appears on the screen). Place the electrodes onto the skin. Set the intensity level of the device (when the device is switched on, the intensity is set to zero). To increase the intensity, press the INTENSITY+ button repeatedly until the patient experiences a light pleasant tingling sensation.



**NOTE! The level of intensity is controlled subjectively according to the patient's sensations when the skin surface comes into contact with the electrodes. The pain sensation threshold should not be exceeded. When switching the device on, minimum energy range will be automatically set.**

Having stabilised the skin impedance of the skin under the electrode, the device emits an audio signal. Subsequently, on the high part of the screen a T value of the device's time spent on the zone is displayed. Write down the number. Next the device should be moved to an adjacent zone. Those areas where the treatment time of the device differs considerably from that in adjacent areas either positively or negatively are referred to as latent Trigger zones. These zones should be treated using the

THERAPY program for 3-5 minutes at the frequency 60 or 77 Hz.

If the treatment time of the TEST program is over 1 minute, the electrodes should be moved to an adjacent area while continuing the process. This zone should be regarded as the latent Trigger zone. Move to the next zone for testing.

# PURPOSE AND APPLICATION OF SCREENING PROGRAM

The SCREENING program is intended for the rapid assessment of homogeneity of electrical resistance of the skin zone (ERSZ) before and after DENS treatment. One measurement of the surface resistance of the skin is made within the first five seconds after the device is applied.

The energy range is either minimum (ER-1) or comfortable (ER-2). The treatment method is stationary (electrodes are moved to another position after an audio signal sounds). The SCREENING program operates at frequency of 10 Hz. Only in-built electrodes are used in the process.

To enter the SCREENING program, switch on the device. Press FREQUENCY- button repeatedly until the word SCREENING appears on the screen. Place the electrodes onto the selected skin zone. Set the level of intensity by pressing the INTENSITY\* button until the patient experiences a light pleasant tingling sensation.

Upon application of electrodes on the skin surface the device automatically starts to measure the change in electrical resistance on the skin in this zone in response to the impulse of the device.

After the measurement process the device emits a short audio signal and shows the measurement results on the screen in the form of ALT index (from 0 to 100). Write down the shown number and move on to diagnostics of the next zone.

Latent [Trigger zones](#) are the skin zones where the ALT value is significantly different from the mean value on both sides. After assessing the value of the zone, the affected zones should be treated in the [THERAPY](#) program for a period from 3 to 5 minutes at frequencies of 60 or 77 Hz at the second (comfortable) intensity level.

The first ([ER-1](#)), minimum energy range (at the sensation threshold) amounts to an effect of weak intensity, in which the patient feels either no sensations (pain, stinging, etc.) or feels a slight vibration. This energy range is used mostly in [TEST](#) and [SCREENING](#) programs as well as in [THERAPY](#) program for early age and preschool age children

The second (ER-2), comfortable energy range (above the sensation threshold but below the pain threshold) amounts to an effect of medium intensity, in which the patient clearly feels a vibration, a pleasant stinging or burning but painless sensation. This range is used as the main DENS mode in the [TEST](#) and [SCREENING](#) programs, in the [MED](#) program, and as the main range of energy exposure in the [THERAPY](#) program.

The third, maximum energy range (ER-3, sensations at the pain threshold) amounts to an effect of high intensity, in which the patient feels painful stinging or burning. Such intense exposure may be followed by a spontaneous muscle contraction next to the electrode (the myostimulating effect). This energy range (ER-3) is only used in the regular [THERAPY](#) program in pronounced painful conditions in adolescent and adult patients, as well as when rendering emergency medical aid.

# ZONE OF FRONTAL PROJECTION OF PATIENT'S COMPLAINT

Only the complaint presented by the patient him/herself can determine the primary treatment zone, using the in-built electrodes of DiaDENS devices using the THERAPY program. For instance, in cases where the patient complains of knee joint pain, the electrodes are placed on the impaired joint area, whereas in diseases of the broncho-pulmonary system they are placed on the chest area.

In areas of pain or in localised absence of sensitivity, the energy range ER-2 or ER-3 will be applied. In other situations and prepu-bescent children, the ER-1 range should be used.

In most cases the treatment should be carried out at a frequency of 60 or 77 Hz. Where the pain is acute, the procedure should begin at a frequency of 200 Hz until the pain subsides, and then continued at frequencies of 77 and 20 Hz, with 3-5 minutes being spent at each frequency. For treatment of the frontal projection zone, both the stationary and the labile ways of treatment can be used, as well as the labile-stationary way.

The duration of the treatment on the zone depends on the presence or absence of the pain syndrome. If the patient's main complaint is pain, then the device action will be continued until the pain has completely disappeared or has considerably diminished. If there is no pain, then the action will be continued until the central complaint has disappeared (e.g. stuffiness of the nose, coughing, shortness of breath, palpitation, skin sensitivity disorders, etc.) or until redness appears beneath the electrode, a sensation of "goose flesh", a feeling of warmth or lightness. The treatment of the device in a single zone often causes the patient to relax and fall asleep; in this case, the DENS should also be stopped.

# Trigger zones

Trigger zones (TZs) are specific abnormal zones at certain areas and zones of the human body. As a rule, healthy people should not have Trigger zones. This is a phenomenon brought about by specific neural-reflex connections of the skin, sinews and muscles with internal organs and organ systems.

Disorders in the functioning and the structure of internal organs, in certain limited skin areas, in sinews, muscles, periosteum, lead to an occurrence of colour disturbances, sensitivity, enhanced painfulness, areas of induration, changes in electric conductivity and other changes not characteristic of a healthy body and not found in other symmetrically positioned parts of the body. These have been referred to as "trigger" zones.

The Trigger zones can be active (visible) and latent (hidden).

## **Active TZs**

Active TZs can be revealed by the operator by means of questioning the patient, through examination of the latter, and with palpation (with the fingers) and percussion on the body surface.

The active TZs comprise:

- localised projections of complaint (e.g. pain in certain parts of the body or the extremities);
- localised painfulness occurring after palpitation with fingers or following movement;
- localised disruption of skin sensitivity, sweating, temperature;
- reddening or paling of separate skin areas;
- localised induration in the skin, focal painful swellings, "goose flesh" on a restricted skin area, spots of abnormal pigmentation or flaking, etc.;
- localised change in the muscle tonus, induration of muscle tissue in various places, of various shape and extension (varies from a few millimetres to a few centimetres).

The active TZs in patients with internal organ diseases are often manifest in localised areas with enhanced sensitivity and/or reflected painfulness in respective areas (segments) of the body (the Zakharyin-Ged zones).

## **Latent TZs**

The appearance of latent TZs is associated with localised changes in electric skin impedance and with a localised vegetative response that will occur in segmental or general zones, or in the zone of frontal projection of the organ in case of its function disorder.

The main differences between latent and active TZs can be seen in the following:

- Latent TZs appear on the human body in the preclinical stage of any acute disease or as an exacerbation of a chronic pathologic process, i.e. prior to the appearance of complaints and active TZs in the patient.
- Latent TZs are not revealed by ordinary techniques of examination (in physical examination, palpation, percussion, listening, etc.).
- Latent TZs can only be revealed using DENS.

Latent TZs can be revealed both in the TEST and the THERAPY programs.

In the TEST program, the following indications of latent TZs will be in evidence:

1. Sensitive asymmetry- localised change of the skin sensitivity during DiaDENS Device treatment in any program, but at the same ER (in this area, in comparison to others, the patient feels either an enhanced or a weakened piercing sensation).
2. Localised change in skin colour. Following treatment of a skin area under the device electrode (contact asymmetry) or in another body area (distant asymmetry), reddening or paling appears, distinguishing this particular area from others.
3. Temporary asymmetry. Zones where the treatment time of the device in the TEST program up until the signal sounding is considerably different from that of the treatment in other areas, either greater or less, or zones where the treatment time is over one minute.
4. Change in ALT index in the SCREENING program on adjacent or symmetrical sections of the skin, either increase or decrease.
5. Localised increase in perspiration. Following treatment of a skin area, drops of perspiration appear under the device electrode thus distinguishing this particular area from others.
6. Change in the operational sound of the device in a localised skin area during treatment in using the THERAPY program in the labile mode.
7. When moving the device in the THERAPY program, the operator has to make an effort when moving the electrodes

in a separate skin area (the "sticking effect").

The active and the visible latent TZs are subject to mandatory treatment in the THERAPY program at ER-2 during 3-5 minutes.

***Posterior zone of the meridian midpoint or the posterior midpoint line of the body.*** In this zone, the BAP ( biologically active points) of the posterior meridian midpoint is localised. It covers the spinous processes of vertebrae from the top to the second cervical vertebra to the last sacral vertebra. The spinous processes of vertebrae are located on the back and can easily be felt in almost all people.



The treatment is performed using the TEST or SCREENING programs at minimal or comfortable energy level (ER-1 or ER-2) in order to reveal latent Trigger zones (section 4 of Chapter 4). The [stable](#) treatment mode is applied.

***The "concordance points" zone or paravertebral zone •.*** The paired skin zone (right and left). It is situated paravertebrally, i.e. next to the spine and parallel to the Posterior zone of the meridian midpoint. In projection of this zone, sympathetic ganglia of the vegetative nervous system are situated. Besides, it is a zone of frontal projection of the spinal cord root exits.



When treating the "concordance points" zone using the TEST or SCREENING programs, the device electrodes are established in the order indicated with numbers in the Figure. The LT zones (section 4 of Chapter 4) are shown when comparing parameters in symmetrical areas. The treatment energy level will either be minimal or comfortable.

***The trigeminal zone*** is a zone of frontal projection of the passage of the upper, middle and lower branches of the trigeminal nerve on the right and left sides.



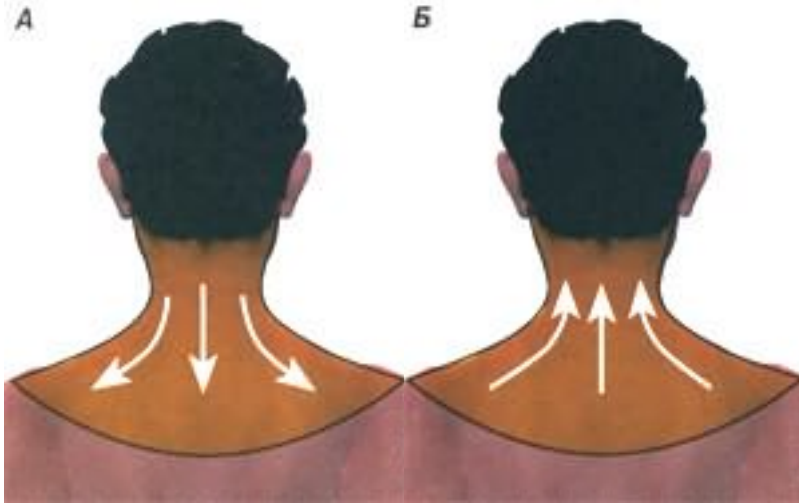
The points of the trigeminal nerve branch passages are located on the face:

- the first pair of points (the upper branch) are in the eyebrow area, near bridge of nose;
- the second pair of the points (the middle branch) are ectad from the nasal wings;
- the third pair of the points (the lower branch) are a little below the corners of the mouth.

Treatment in this zone is performed in the following way: the first pair of points followed by the second and the third ones will be treated using TEST or SCREENING programs. The results obtained at symmetrical areas should be compared in order to reveal the LTZ (section 4 of Chapter 4).

## Cervical-collar zone (CCZ)

The upper limit of this zone passes along the outer surface of the neck at the level of spinous process of the second cervical vertebra. The lower limit is an imagined horizontal line drawn at the level of the scapulae. The lateral limits lie in the lateral surfaces of the neck, shoulders, and upper arms on both sides. The device treatment of this zone is performed using the TEST or SCREENING programs in the stable mode at ER-1 or ER-2, with revealing the [Trigger zones](#). Apart from segmental responses, treatment of this zone will result in a general adaptive response, in the form of normalization of the vegetative nervous system functional condition on a widespread basis. This makes it possible to use treatment of the cervical-collar zone in diseases of the brain vessels, chronic inflammatory conditions in the head and neck areas, in neuroses, in changes of arterial blood pressure of various aetiologies, and in other diseases.



### IMPORTANT!

When treating the cervical-collar zone one should take the following into consideration:

- in diseases whose symptoms include increased intracranial and arterial pressure (blood pressure - BP), the direction of the device movement along the zone in the THERAPY program must always be top-down;
- in diseases whose symptoms include decreased BP and in conditions of shock, the direction of the device movement along the zone in the THERAPY program must always be bottom-to-top;
- the ER-3 action will always increase BP in patients;
- in stable normal BP, the direction of the device movement along the CCZ must always be horizontal;
- in unstable BP, prior to use of the device over the CCZ, it is advisable, first of all, to measure the BP and to continue working according to concrete values.

## **"Cervical circle Zone" (CC)**



The device treatment will be performed in the TEST or SCREENING programs at the minimal or comfortable energy level, starting from posterior central line of the neck and then moving the device along the neck circumference, bypassing the zone of the lower third of the neck in the front (the frontal projection of the thyroid gland) and closing the circle on the back of the neck.

In the zone of "cervical circle", large nervous branches and nodes of the vegetative nervous system, large blood vessels and lymphatic nodes are localised. The "cervical circle" is included in the DENS prescription when dealing with any problems associated with diseases of the head (pathologic changes in the brain, hearing organs, poor vision, diseases of throat and nose, etc.) and neck (laryngitis, pharyngitis, tracheitis, etc.).

## The lumbar-sacral zone (LSZ)

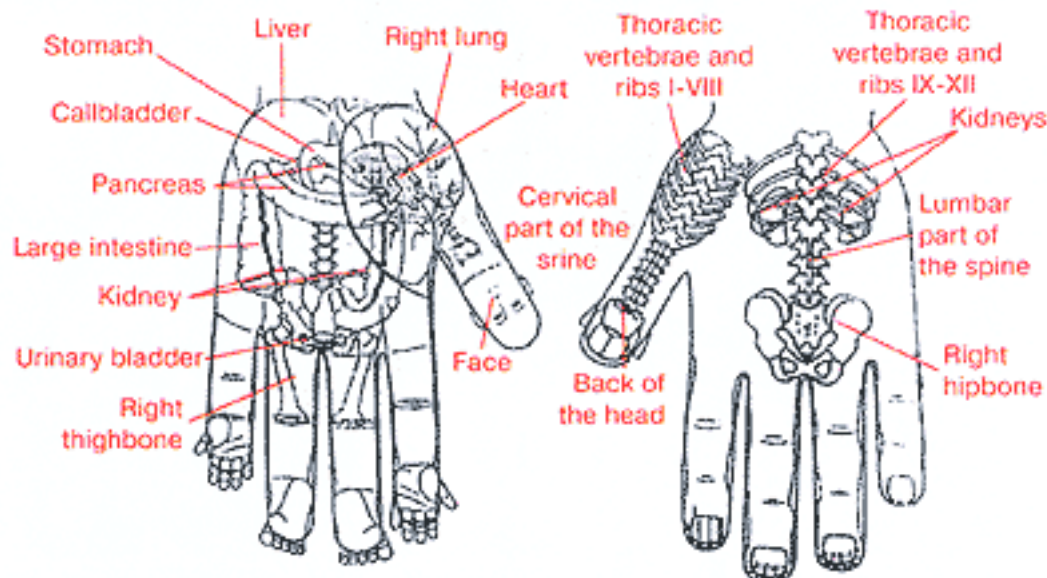


LSZ is situated on the body's back surface. The zone's upper limit is the twelfth rib, and the lower limit is where sacrum meets the coccyx. From the sides, it is restricted by the lateral surfaces of the body on both sides. Treatment upon this zone is performed using the TEST or SCREENING programs at the ER-2 range, with exposure of the Trigger zones.

In this zone, DENS treatment has an effect upon blood supply and trophism of the small pelvis and the lower limbs. Treatment of the lumbar-sacral zone is given in instances of diseases of the lower limbs, intestine, in enuresis, functional disorders of the male sexual sphere, functional and inflammatory diseases of female sex organs, in secondary infertility, in the rehabilitation period after diseases and injuries of the spinal cord, and in some other diseases.

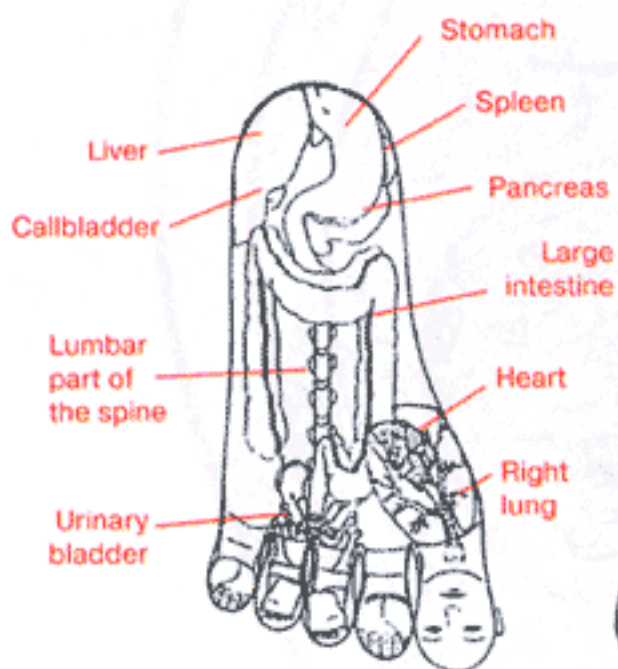
Apart from particular segmental responses, treatment of the lumbar-sacral zone induces complex general responses manifested by a aponic effect upon the whole organism, improvement of sleep, appetite, raising of the general tonicity.

## *Su Jok concordance system in the hands and feet*

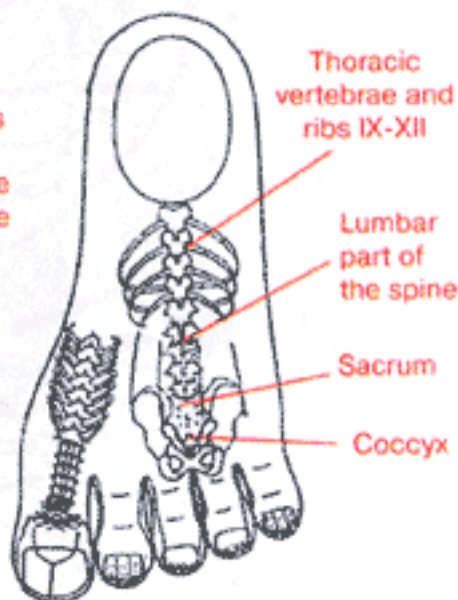


**PALM**

**BACK OF THE HAND**



**SOLE**



**BACK OF THE FOOT**

Where complaints are in evidence, the points and zones of the Su Jok concordance system should be treated using the THERAPY program at 20, 60 or 77 Hz at the ER-2 range for 3-5 minutes. Treatment of the hands and feet zones can be combined and alternated until the desired effect is achieved. In elderly persons, children and obese patients, treatment of the Su Jok concordance systems yields even better effects than treatment of a complaint in frontal projection. As a course treatment for chronic diseases (when exacerbation of the condition has already been halted), the Su Jok zones should be treated in combination with the following programs: first any of the two sides with the THERAPY program at the ER-2 range for 2-3 minutes, then the other side using the TEST program.

## **DiaDENS Application Programs**

**Stationary** - when the electrodes remain immobile on the skin surface for the duration of the action exerted upon the suggested area.

## **DiaDENS Application Programs**

**Labile** - when the inbuilt electrodes of the device are moved smoothly over the suggested operating area, without breaking contact with the skin surface, at a velocity of 0.5 to 2-3 cm per second.

## Straight projection of the nose



## Submandibular zone



## **DiaDENS Application Programs**

**Stationary-labile** - when the device's electrodes can be held for some time in specific skin areas.